

## STRAWBERRIES

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of one cent was incurred in placing the berries in the cabinet of the dealer, who purchased them for 20 cents and sold them to the consumer at a price of 28 cents. No additional cabinet space was required for the dealer to handle the berries. The company's advertising of the product consisted of a three-color card sign.

As a result of its experience, the Franklin Company discounts the possibilities of the frozen berries as a year-round sales item, and concludes that the winter possibilities are fair, due to "too many in the field."

The experience of another Nebraska firm, the Harding Cream Co., of Omaha, is interesting because it emphasizes some of the problems which the manufacturers agree will have to be solved before the frozen berries can be firmly established as a sales item.

"We have investigated this item with considerable care and have decided the margin of profit is small and the trouble and grief large. Fruit that would leave our hardening room in good condition is often placed by the dealer on the shelf with his ordinary canned fruit or placed in a salt-and-ice box, which is insufficient refrigeration. Under these circumstances the product gets to the consumer in a partially fermented, rancid or partly spoiled condition, and the blame reflects back on the man whose name is on the label.

"If there were enough profit in the merchandise it might pay us to put on an advertising and educational campaign to teach the public and dealers how to handle these products, but we have decided not to divide our time, but to stick to the manufacture of our own product."

### Mishandling By Dealer

The possibilities of mishandling by the dealer must be considered. A dealer of one large ice cream manufacturer arranged the frozen strawberry containers on his counter in columns. Naturally, the berries thawed out and became rancid, which adversely affected the opinions of purchasers. It is recognized, however, that this condition could be overcome by a program of instructing dealers in the proper handling of frozen fruit.

The Arctic Dairy Products Co., of Detroit, Mich., is another firm which experimented with the sale of frozen strawberries during the past winter. An official of the firm writes as follows:

"I do not feel that we have any figures available that would be reliable at this time, inasmuch as our experience in connection with frozen strawberries has been largely from an experimental standpoint, and we have not reached any definite conclusions as to the commercial possibilities from a profit standpoint.

"Costs can vary so greatly for several reasons—the cost of berries themselves and the amount used in the re-sale package in proportion to the amount of juice contained."

Another Detroit firm, the Gabel-Risdon Creamery Co., Inc., also considered the sales of frozen strawberries but did

## Uruguayan Women Like Refrigerated Foods



WOMEN of far off Montevideo are interested in electric refrigeration, as attested by the large attendance at demonstrations which are conducted in the display rooms of the Montevideo,

not make very extensive efforts in their distribution for the following reasons:

"We bought frozen strawberries, but due to the strong market on strawberries, and due to the fact that our competitors were putting on the market either a local or a southern berry to compete with our western berry, at a lower price, we thought it best not to go in the market, excepting with a few exclusive stores and these have done very well."

### A Winter Seller

The Gridley Dairy Co. of Milwaukee, Wis., summed up its experiences in the sale of frozen fruit with the statement that "we sell only strawberries put up in one-pound packages which sell at 35 cents a package. It is our idea that this will only be a winter seller and so far we have not enthused very much over the idea of selling frozen fruit. There has not been much demand for the product as seemingly they are too expensive for the consumer and at the same time there is very little margin in it for our company."

In the metropolitan district of New

Uruguay, branch of General Electric distributors.

The photograph shows a representative gathering of socially prominent women of Montevideo and was the first

of a series of such meetings scheduled there. At these gatherings, the General Electric refrigerator is demonstrated and frozen desserts and chilled salads are served.

York, N. Y., two ice cream manufacturing firms, the Reid Ice Cream Corp. of Brooklyn, and the J. M. Horton Ice Cream Co., Inc., of New York City, outlined how they distributed frozen strawberries. Each of the firms entered the field on November 1, selling the berries in one-pound containers, without providing any additional cabinet space for the product, and supporting the distribution by advertising, which consisted of colored window strips and back-bar signs. Very little newspaper advertising was used. The firms used a ratio of 11 ounces of berries to 5 ounces of sugar and sold the product to the retailers at a price of \$1.66 for a half-dozen. The prevailing retail price to the consumer was 35 cents for a one-pound package. As a result of their experiences, the firms rate the sales possibilities of frozen fruit as "fair," with the proviso that the possibilities might be enhanced by an educational publicity campaign.

The manufacturers who attempted the sale of frozen strawberries during the past winter have learned that at present they obtain the best results in dis-

tribution through stores situated in the better class of residential neighborhoods. This is because strawberries in the winter months are generally considered a luxury and poorer families are unable to purchase them.

Another resistant to larger sales of the product is that the housewife is unaccustomed to purchase fruit in drug stores and other outlets of ice cream. This sales resistance can be overcome, many manufacturers believe, by a campaign to convince the housewife that the frozen product—kept under proper conditions, the facilities for which the manufacturer has at his command—is just as palatable as the fresh strawberries. Also, it is recognized that an opportunity exists for the ice cream manufacturer to promote the sale of both ice cream and the frozen berries to form a delicious dessert.

For these reasons, many manufacturers are unwilling to pass final judgment on the sales possibilities of frozen fruit until a thorough attempt has been made to solve the problems that have presented themselves, which is usual with any new development.

## FOOD CENSUS

FACTS on food distribution which are of interest to every retailer and wholesaler of foods are now being made known by the Department of Commerce following its comprehensive survey of the Louisville, Ky., market. Valuable data has been brought to light in the search there which can be used to good advantage by food distributors in most any town or city in the country. This "Census of Food Distribution," Part I, reveals what people eat, what it costs to supply them with their food requirements, through what channels it moves, and other interesting facts.

The Department of Commerce has used Louisville, Kentucky, as a laboratory for the food industry. As a background for the study of all problems in food distribution, this census of food requirements in one area was undertaken.

It tells what the people of a more or less typical area ate, drank and smoked, by commodities, and per capita, in a single year. Who gets the consumer's dollars, the grocery, the delicatessen, bakery, meat market, lunch room, or soda fountain? And how much? Follows the channels through which this food passed, and the proportion handled in each channel. Studies the expense attached to this distribution—detailed by size of establishment and by divisions such as rent, expense, salaries, etc.

What per cent was sold on credit? By small stores? By large stores? Analyzes the store personnel figures presented. A complete picture of the inventories and number of stock turns for each type of establishment. Retail, wholesale, and brokerage operations covered—2,972 retailers, 157 wholesalers.

An aid to the wholesaler and retailer in studying the restriction or extension of territories and in selecting profit-producing lines. An excellent comparative check on profits, expenses, inventories, turnover, etc., for the merchant.

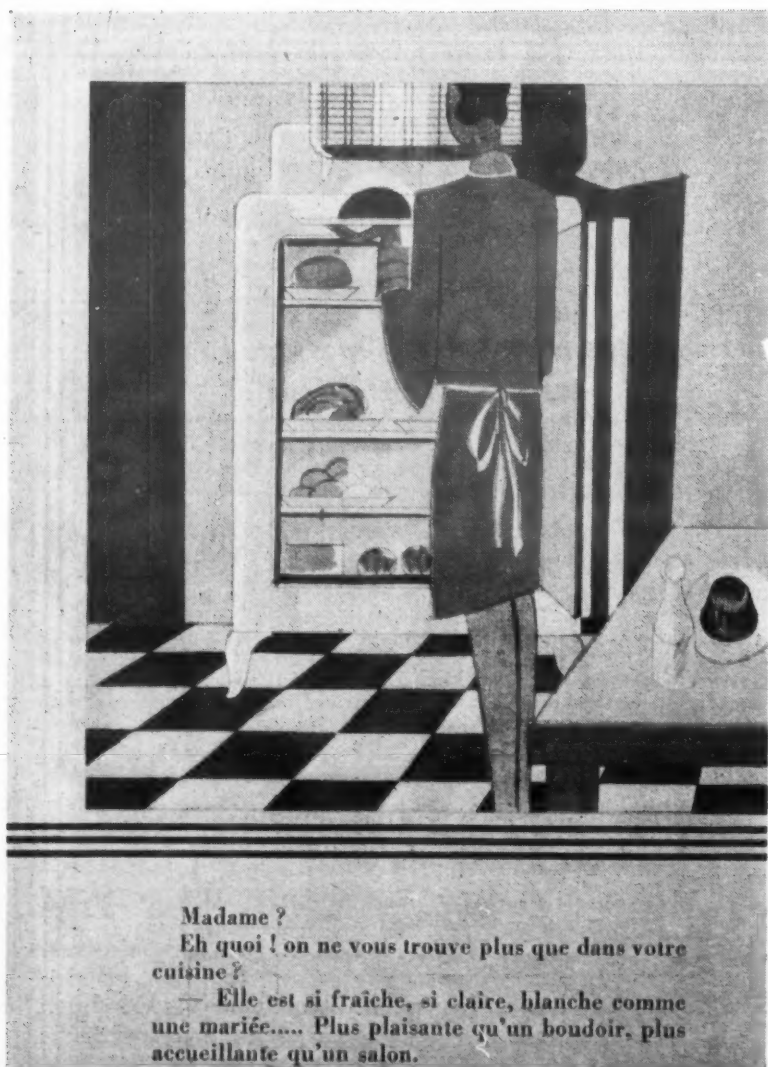
Copies of "Census of Food Distribution," Distribution Cost Study No. 6, may be obtained for 15 cents from the Superintendent of Documents, Government Printing Office, Washington, D.C., or any of the branch offices of the Bureau of Foreign and Domestic Commerce. (Stamps cannot be accepted in payment.)

### REFRIGERATION PROMINENT AT BRIDGEPORT SHOW

Bridgeport, Conn.—Six electric refrigeration companies were exhibitors at the annual Home Progress Exposition held recently in the State Armory. They were: General Electric, Rex Cole; Kalvinator, Tucker Machine Company, and E. R. Schuelke, Inc.; Frigidaire, Frigidaire Sales & Service, Inc. (Downs Smith Company) and Charles J. Collins; Copeland, Jesse B. Woodhull, Inc.; Electrolux, Allen Bros.

Interest in refrigeration is at a high mark. Dealers report that many prospects were uncovered during the show.

## La Fontaine's Fables and Modern Art Sell Refrigerators in Paris



Madame?  
Eh quoi! on ne vous trouve plus que dans votre cuisine?  
— Elle est si fraîche, si claire, blanche comme une mariée.... Plus plaisante qu'un boudoir, plus accueillante qu'un salon.

THEY do thing differently in Paris! As an evidence of this a most unique piece of sales promotion literature has been received from the Societe Generale de Constructions Electriques & Mecaniques, distributors for General Electric refrigerators.

In an eight-page booklet, bound by a spiral wire and printed on a highly-glazed stock resembling celluloid, the company takes an old fable of La Fontaine as an argument for electric refrigeration.

The fable deals with how the animals were troubled by food spoilage and how after a serious council they decided to get some sort of food preservation. Then the French company revises the fable in an ingenious way so that they decide to buy a General Electric; and the tale winds up thus:

"Vous ne vous eclairez point aux chandelles? Vous faites, sans doute, vos visites, en chaise? Es vous voyages, par le coche d'eau?"

"Non pas? Alors vous etes moderne, et je suis sur que vous avez une glaciere electrique, et al meilleure."

All of which, freely translated, means that if you are modern you don't use candles for light and make your trips by horse and wagon, and neither do you employ antiquated methods of refrigeration.

The text stresses the fact that the electric refrigerator is the real means of food preservation, that it is an aid to health and that it is an economical convenience and necessity.

Somewhere between Paris and Detroit someone managed to cut off the advertisement at the right just when it gave promise of becoming interesting. How the conversation ends is a mystery, but it is fairly safe to say that a refrigerator, and a G. E. refrigerator at that, was about to make its appearance as an aider and abetter of the cocktails.



Martini? Rose? Alexander?

— Des cocktails, de la glace! A 20 kilometres de la ville, votre fournisseur est bien obligeant....

— Oh! c'est un vieil ami: il habite dans la



# ELECTRIC REFRIGERATION NEWS

Registered U. S. Patent Office.

The business newspaper of the refrigeration industry

ISSUED EVERY TWO WEEKS  
Vol. 4, No. 18, SERIAL No. 94

Copyright, 1930, by  
Business News Pub. Co.

DETROIT, MICHIGAN, MAY 7, 1930

Entered as second class matter  
Aug. 1, 1927, at Detroit, Mich.

FIFTEEN CENTS PER COPY  
TWO DOLLARS PER YEAR

## YEARS OF WORK END AS SAFETY MEASURE NEARS FINAL STAGE

### Standard Refrigeration Code Now Ready for A. S. A.

New York, N. Y.—After a protracted period of preparation which grew from months into years, the Standard Safety Code for Mechanical Refrigeration, sponsored by the American Society of Refrigerating Engineers, is ready for submission to the appropriate committee of the American Standards Association. It goes to the A. S. A. with the practically unanimous approval of the diverse elements which have been working over its multitude of provisions for so long a time.

A few minor changes, chiefly changes in wording which do not greatly alter the meaning, are still being voted on by the members of the council of the A. S. R. E., but the vote so far has been favorable, and there is little chance of any further changes. A few members of one of the industries involved have expressed their disapproval of those sections of the code which limit certain types of multiples to fifty pounds of refrigerant, but efforts are being made to obtain the withdrawal of these objections, so that the Standard Safety Code may go to the A. S. A. without a dissenting voice.

The approval of the N. E. M. A., one of the last groups to come into line, was obtained recently, and with that approval on record it was not hard to get the code into final shape. The N. E. M. A. suggested slight modifications which have been incorporated in the Code.

Anticipating the adoption of the Code by the A. S. A., the officials of the A. S. R. E. are planning aggressive measures to get it before the public. Everything possible will be done to put it in the hands of public officials, power companies, citizens' associations, and other organizations interested in the promotion of public health and safety. Copies of the Code will be made available for the use of municipalities, and it is hoped that the Code will be adopted by many cities which have been waiting for some standard on which to base their refrigeration ordinances.

The complete text of the Code as it will be presented to the A. S. A., unless some totally unexpected eleventh hour changes are made, is printed on pages 11-15 of this issue of ELECTRIC REFRIGERATION NEWS.

In the last two or three years a large number of articles and considerable correspondence from readers regarding the A. S. R. E. Standard Safety Code, have been printed in the columns of the NEWS. At least two drafts of the Code itself have been published, the first one appearing in the July 4, 1928, issue, and the second two weeks later on July 18.

## STAR FREEZE IS LATEST UNIT PLACED ON MARKET

Dayton, Ohio.—The appearance of a new product in the field of electric refrigeration is announced by the Starr Plano Company, with factories in Richmond, Indiana, and a large sales office in this city. A number of models of the new refrigerator, named Star Freeze, have been placed on display in the local showroom of the company.

For a long time the Starr Plano Company, at its big Richmond, Indiana, plant has been experimenting with electric refrigeration, and a short time ago Starr engineers announced the new Starr Freeze ready for the market.

The new refrigerator comes in a heavily cork-insulated cabinet, attractively finished, with the refrigeration process induced through the "dry system" and the "hold-over" tank process, which Starr engineers claim "means a more constant, low cold, continued even with the absence of current for several hours."

According to J. A. DeHays, of the Starr organization, Star Freeze will be placed in homes under the same sales and service policies which have built the Starr organization to its present position.

### BELSHAW TO OPEN OWN LABORATORY

Detroit, Mich.—Charles F. Belshaw has severed his connections with the George B. Bright Co. and "is striking out for himself in the development of ice cooling devices." For the present, Mr. Belshaw is maintaining temporary quarters at 223 Gregory St., Dearborn, Mich.

## PROGRESS PROMISED ON CHICAGO CODE

Chicago, Ill.—The health committee of the City Council is planning to hold its forty-fifth meeting to consider the adoption of a refrigeration code. Alderman Terence F. Moran, chairman of the committee, is reported to be anxious to get the matter settled once and for all, and Health Commissioner Arnold H. Kegel, is said to be equally desirous of prompt action.

According to Alderman Moran, however, no decision is likely at the next meeting. He says that Alderman John A. Massen, a member of the committee, is preparing to introduce a third ordinance, to add to the two already under

consideration. When asked about his plans, Mr. Massen took the stand that any draft of a proposed ordinance should be submitted to the committee or the Council before being made public, and therefore refused to discuss the character of his ordinance.

Meanwhile, the situation hangs fire, and the Chicago Daily Tribune reports more trouble in the office. A recent article said:

"Charges have been made in the city hall that the committee has been 'stalling' because of threats from gangsters. The plumbers' and steamfitters' unions

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## THREE FOR ONE

Spartanburg, S. C.—B. M. Vise, one of the oldest Frigidaire salesmen in South Carolina from the point of service, topped his quota and when the rambling Frigidaire conventioners distributed prize awards at the Roanoke regional convention he was among the rewarded.

To be more frank, he received five \$20 gold pieces for his sales efforts. When Mr. Vise took his double eagles to a bank, one of them was found to be a rare coin and he received \$75 for it. The news of his luck has spread through the Frigidaire organization. Next year, J. A. Harlan is expected to hand out a rare old coin in every city he visits.

## SOUTHERN CITY HOST AS ENGINEERS MEET FOR SPRING SESSION

### Atlanta Grooms Members and Guests of A. S. R. E.

Atlanta, Ga.—Engineers from many parts of the country are in Atlanta for the annual spring meeting of the Society of Refrigerating Engineers, which was formally opened with the first session this morning, May 7, at the Biltmore hotel, where convention headquarters have been established for the remainder of the week.

From New York, a large number of engineers made the trip via a special train which arrived in the southern city this morning. Delegates from the mid-western cities, Detroit, Cleveland, Chicago and other points arrived in large numbers on southbound trains. Harry D. Edwards, president of the society, led the invasion of the New Yorkers into the convention city. Evidence that the engineers were going to get the most of their stay in Atlanta was easily noted by the number who were toting golf paraphernalia, in addition to their other luggage. Charles T. Baker, chairman of the Atlanta committee, has arranged a well filled entertainment program for the members, and the fine fairways in and about the city will have a big appeal to the "golfing engineers" during their short sojourn.

At the opening session a varied and interesting program was presented by men prominently associated with the refrigeration industry. F. W. Rabe, engineer with Anheuser-Busch, Inc., St. Louis, Mo., put the technical discussion under way with a paper, "Tests on Solid CO<sub>2</sub> and Water Ice." A number of tests indicating the relative efficacies of these two refrigerating mediums were covered in this paper. Particular attention was made to the adoption of solid carbon dioxide as a refrigerant for cooling truck bodies used in the transportation of ice cream. "Latent Heats of Common Edibles" was the subject of a discussion by A. H. Cooper, Mechanical Engineering Department, University of Tennessee, Knoxville.

Equipment for retailing and merchandising quick-frozen products was next considered by two well known cabinet men. R. E. Ottenheimer, Ottenheimer Bros., Baltimore, Md., spoke on "Low Temperature Refrigeration for Retail Merchants," and G. J. Hopkins, chief engineer, McCray Refrigerator Co., Kendallville, Ind., on "Low Temperature Display Cases." These two papers were

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## ZEROZONE CONCENTRATES ON LOW PRICED MACHINE

Chicago, Ill.—A new low priced refrigerator has just been announced by the Zerozone Corporation. It will be sold at retail for \$149.50 and will be known as Model L 25. The Zerozone Corporation has been in business for about a quarter of a century, and the new machine follows a long line of distinguished predecessors.

L. C. Keely, vice-president and general sales manager, also announces that the new model can be installed by merely turning three valves and plugging into an ordinary electric light outlet. The machine has been designed and built in response to frequent requests from Zerozone distributors and dealers for a low-priced domestic unit which could be sold for about \$150.00, and the Zerozone engineers have been at work on the new model for several years. Late last fall tests of the first machines were begun and have been continued for the last four or five months. The new unit is now in production.

At present Zerozone is marketed through a large distributor and dealer organization, but there are a limited number of direct franchises now open to concerns who can handle a volume business.

The Zerozone Model L-25 includes the latest features, and is a trim and smart job that will provide high quality refrigeration service, over a long period, in private homes and apartment buildings at a small operating cost.

In the near future Mr. Keely will announce complete details regarding a merchandising and advertising program that will feature in a prominent way this new low-priced model.

The new Model L-25, as well as the entire Zerozone line, is now on display at the factory of the Zerozone Corporation, 927 E. 95th Street, Chicago.

## Presiding at Atlanta



Harry D. Edwards, president of the American Society of Refrigerating Engineers

## DETROIT A.S.R.E. DEVOTES SESSION TO REFRIGERANTS

Detroit, Mich.—The two inseparables, refrigerants and oils, continued to show adhesive propensities when they made their appearance on the program at the monthly meeting of the Detroit Section of the American Society held on Monday evening, April 28, at the Masonic Temple. These two factors in the operation of the refrigeration machine amalgamated completely to make the evening an interesting one. These two constituents mixed in about the same proportions and the program was a well balanced one. Following the dinner the members and their guests adjourned to one of the meeting rooms for the technical session.

L. A. Phillips of the Research Department of Kelvinator Corporation, Detroit, presided at the session and manipulated equations on the blackboard with about the same ease and speed as an inveterate marker on the Wall Street exchange. Sulphur dioxide was presented to the engineers by Charles W. Johnston, general manager of the Virginia Smelting Co., West Norfolk, Va., who in an easy manner described this product. Production of this refrigerating medium was fully covered by the speaker who calmly said that it lacked the "come hither" appeal. "It has no accumulative effects," Mr. Johnston said, as he cited several instances where serious accidents occurred without harming the health of the parties concerned.

Sidetracking from the refrigeration point of view, he aroused the interest of the engineers with the big part that sulphur dioxide is playing in transcontinental shipments of fresh fruit. In California, fresh fruit in cars awaiting shipment is treated with small percentages of sulphur dioxide which prevents fruit

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## KELVINATOR PROFITS FOR QUARTER SHOW BIG GAIN

Detroit, Mich.—Kelvinator Corporation reports for the quarter ended March 31 net profit of \$883,558 after all charges, equal to 74 cents a share on 1,186,106 shares, against profit of \$273,250, or 23 cents a share on 1,167,800 shares in like period of 1929.

Gross Profit.....\$2,198,960.24  
Total Operating Expenses... 1,176,616.66

Operating Profit.....\$1,022,343.58  
Other Deductions..... 138,785.42

Normal Net Profit.....\$ 883,558.16  
President George W. Mason, commenting on the statement after the quarterly Directors' meeting, April 24, at the Corporation's main office, said: "The new Kelvinator models, introduced last fall and offering the four-way cold refrigeration, have been so enthusiastically received that this year we have exceeded all previous sales records by wide margins, and March was the greatest month in the history of Kelvinator."

## PEERLESS LOOKS AHEAD TO AIR COOLING FIELD

Chicago, Ill.—Air cooling equipment within the reach of the average store owner has been put on the market by the Peerless Ice Machine Company of this city. Four general types of cooling fans, pedestal mounting, wall bracket mounting, ceiling suspension and wall insert mounting are designed to fit any application in drug stores, restaurants, candy stores, offices, clubs, and many other similar businesses. They are also adaptable to air cooling in the home.

The pedestal type of cooling fan delivers a cool, dry breeze 20 to 30 feet. Water extracted from air is carried through a special drain pipe in the pedestal. Refrigeration is furnished by a one-ton-ice machine. Units can be connected in multiple with single ice machines in large installations. Peerless air cooling equipment will be shipped in "package" form, requiring very little work for the installation.

Recently, a well-known engineer in the industry, predicted that in the next five years great strides will be made in the conditioning and cooling of air in the homes.

"It was many years," R. W. Kritzer, vice-president and general manager of the Peerless Ice Machine Co., said, "after the original development of the ice machine before the many benefits of mechanical refrigeration were made available to the household in the type

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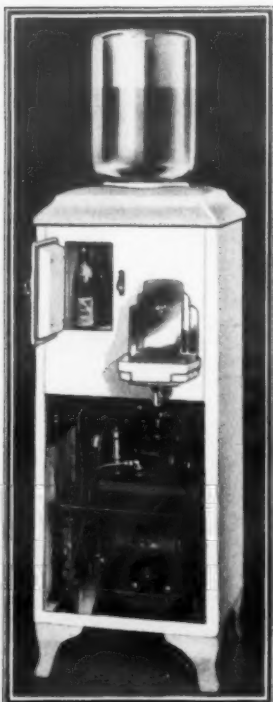
# KELVINATOR

## Announces

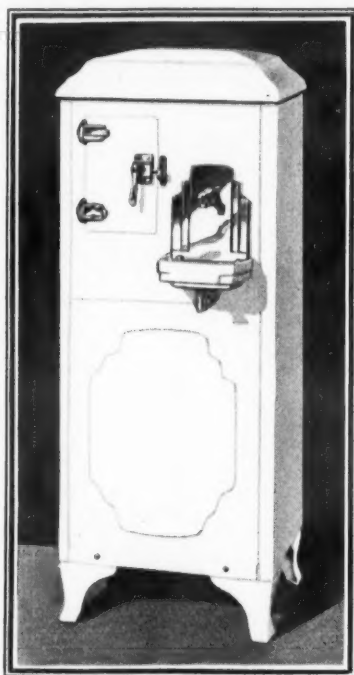
### A Complete New Line of Distinctively Modern Electric Water Coolers

**A**T a time when refrigeration is uppermost in the minds of thousands, Kelvinator announces a complete new line of modern Electric Water Coolers, especially designed for private offices, clubs, homes, etc. This newest Kelvinator product represents the sum-total of 16 years of exclusive experience in the manufacture of electric cooling equipment.

The stamp of newness is reflected in every detail of this brilliant line of water coolers—from the glistening white all-porcelain tops to the smartly fashioned open base legs—in a totally new cooling mechanism embodying all of the good features of the "instantaneous" type coupled with the advantages of the "reserve storage" type—in slimly beautiful, colorful cabinets of ultra-modern design—and in a new mechanical unit designed especially for water cooling.



Included in the new line are cabinets for bottled water as well as for direct connection to the city water mains. In addition, there are models in both types incorporating a unique Cold Storage Compartment for cooling bottled goods, soda water etc.



Kelvinator Water Cooler Model CW 50, for direct connection to city water mains. Equipped with special cold storage compartment.

The market for electric water cooling equipment is a tremendous one. The surface has hardly been scratched. Kelvinator dealers hold the pass-key to this great market with this new line of equipment suitable for every water cooling requirement, including hospitals, schools, factories, office buildings, theaters, homes, clubs, hotels, banks and all public institutions.

Kelvinator dealers not only share in this one branch of the refrigeration business

—they are selling the electric refrigerator that has shown the greatest percentage of sales increase in 1930—Kelvinator!

Dealers interested in today's greatest refrigeration franchise will do well to write for complete information on the new Super-Automatic Kelvinators. All communications held in strictest confidence.

#### Features of the New Kelvinator Electric Water Cooler

**Cabinet**—All Steel, Removable legs, 5 in. high. Available in Sage Green Crystal, White or Mahogany. Top of Porcelain-on-Steel.

**Hardware**—Chromium Plated Brass in smart, modernistic treatment, carrying out ensemble effect of entire cabinet.

**Cooling Unit**—Of special Kelvinator design. Dry expansion, direct cooling. Completely inclosed in porcelain shell.

**Mechanical Unit**—Especially designed for water cooling. Rugged, trouble-free and quiet. All adjustments instantly accessible from front panel.

**Temperature Control**—Adjustable thermostatic control to give any desired temperature.

**Capacity**—Available in 3½ and 6 gallon-per-hour sizes.

#### DETROIT A.S.R.E. MEETING

(Concluded from Page 1)

mold and too fast ripening. Grapes are treated in this way and the sulphur dioxide eliminates the danger of mold and cargoes arriving on the east coast after a trip from the west are found to be in perfect condition.

Vitamin C in fruits through the use of sulphur dioxide can be retained in the drying process. Mr. Johnston pointed out that drying of fruits through the ordinary process causes them to shrivel, while through the methods of sulphuring the evaporation is uniform throughout and the gas tends to break down the tissues. At present, the fruits receive two doses of sulphur dioxide, first when the fruit is being sun cured and finally by the packer.

Another interesting adaption of this product was brought to light, when the speaker cited how sulphur dioxide was used to counteract the taste in the water used in the city of Toronto. Calcium chloride for purifying the water reacted with phenol to give it a bad taste. After much investigation Toronto officials found that by using larger amounts of calcium chloride and counteracting with sulphur dioxide the taste in the water was entirely eliminated.

Next on the program was J. M. McNulty of the General Electric Motor Department, Detroit, who announced that he was an "engineer by absorption" of sulphur dioxide. After a short tussle with his trusty portable projecting machine, he was able to illustrate the activities through which the refrigerant passes through in the General Electric machine. The film depicted the course of the refrigerant in the refrigeration cycle. Rising temperatures in the cabinet caused the refrigerant to boil and operate the pressure switch which in turn set the compressor in action and eventually completed the refrigeration cycle.

To make the evening slide along faster, oil was next introduced into the refrigerant session, by J. Musser Miller of the Technical Department of the Standard Oil Company of Indiana.

Mr. Miller outlined the comprehensive facilities needed for obtaining and refining oils. He traced the channels through which the raw product passes until it is ready for the market. Various methods of refining were described showing how products of lower boiling points were first driven off the crude liquid by contact with heat. Sulphur dioxide is used in the process to remove foreign matters in the oil.

"If the oil is not well refined," Mr. Miller said, "it will act with the sulphur dioxide in the machine and foreign deposits will stick to the bearings, piston rings, etc., thereby causing considerable trouble. Pale oils when used with methyl chloride in a machine will build up a copper plate."

With the aid of blackboard diagrams, Mr. Miller presented data regarding the viscosity of oils at various temperatures. Oils with viscosity of 100 to 200 per second he showed are the best for refrigerating machines. Breakdown, flash, cracking and other qualities of different kinds of oils were also touched upon by the speaker.

Mr. Phillips, chairman, closed the meeting with an interesting discussion of the new, non-toxic refrigerant recently announced by Thomas Midgley, Jr., of the General Motors Corp., at the Atlanta meeting of the American Chemical Society a short time ago. The engineers showed a keen interest in this new refrigerant and many of them are of the opinion that its use in the household refrigerating machine field will be very limited. Mr. Phillips pointed out the non-explosive and non-inflammable qualities of the gas technically known as fluoro-chloro-methane.

#### DAVID A. BROWN INSISTS RECEIVER IS NOT NEEDED

**Detroit, Mich.**—Petitioning for a receivership for the General Necessities Corporation, three stockholders obtained in Circuit Court an order to show cause why the receivership should not be granted.

The petitioners, John H. Cummings, W. E. Sexton and Adelbert H. Lindsey, attack David A. Brown, president of the company, in their bill of complaint.

Informed of the receivership action, President Brown said:

"There is absolutely no need of a receivership in our company. We are getting along splendidly. If they want me to, I'll step out and sell my 51 per cent of stock to the present stockholders, if they agree not to resell. I haven't sold one share of my stock."

The General Necessities Corporation, capitalized at \$7,000,000, controls and operates these subsidiaries:

Absopure Refrigeration Corp., General Ice Cream Company, General Cold Storage Company, General Properties Company, Absopure Products Company, Detroit Markets Company and Detroit Arena Company.

The corporation owns the General Necessities Building, the Absopure Building, Arena Gardens and Grand-Trumbull Market.

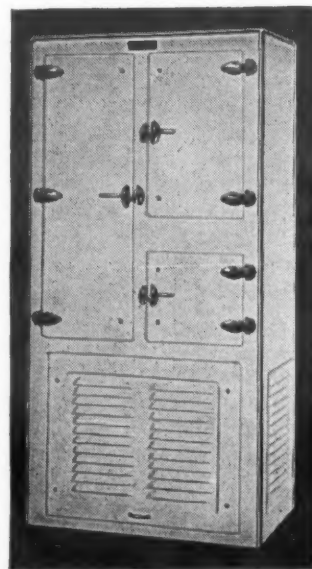
#### NEW DISTRIBUTOR FOR FORT WAYNE

**Ft. Wayne, Ind.**—The Ft. Wayne Iron Store was recently named Kelvinator distributors here. Herbert W. Lang is president, and Charles W. Lang, his brother, is secretary-treasurer. They have opened a retail department under the name of the Home Equipment Co. to handle radio, Kelvinator electric refrigeration, and other home appliances. This department will be in charge of W. S. Frederickson, who has had many years of experience in marketing home appliances. A number of counties contiguous to Ft. Wayne will be covered.

#### GLUECK OPENS WATER COOLER DEPARTMENTS

**Kansas City, Mo.**—Glueck Company, 15th and Grand, has opened a General Electric water cooling department. H. G. Frazier, who was formerly with R. Cooper, Jr., Inc., of Chicago, is in charge. Recently, this company installed a C 450 General Electric refrigerator in the County Home at Marshall, Mo.

#### "It was built by BOHN"



The handy base cabinet may either be used for refrigerating machinery or the storage of cooking utensils, canned goods, vegetables, etc.

The name BOHN is our warranty that the finest materials obtainable have been utilized by skilled craftsmen and refrigeration engineers to build for you this beautiful and scientific product—an all-porcelain BOHN refrigerator.

BOHN installations include many of the leading hotels, restaurants and hospitals in America.

BOHN refrigerators are used exclusively on all Pullman-built railway dining and buffet cars.

The United States War Department has purchased hundreds of all-porcelain BOHN refrigerators for our army barracks and battalions.

In choosing BOHN refrigerators, discriminating home owners throughout the country have given BOHN a representative list of which any manufacturer might be proud.

Write for details of the remarkably low prices that are now prevailing.

**BOHN REFRIGERATOR COMPANY**  
SAINT PAUL, MINNESOTA

KELVINATOR SALES CORPORATION, DETROIT, MICHIGAN

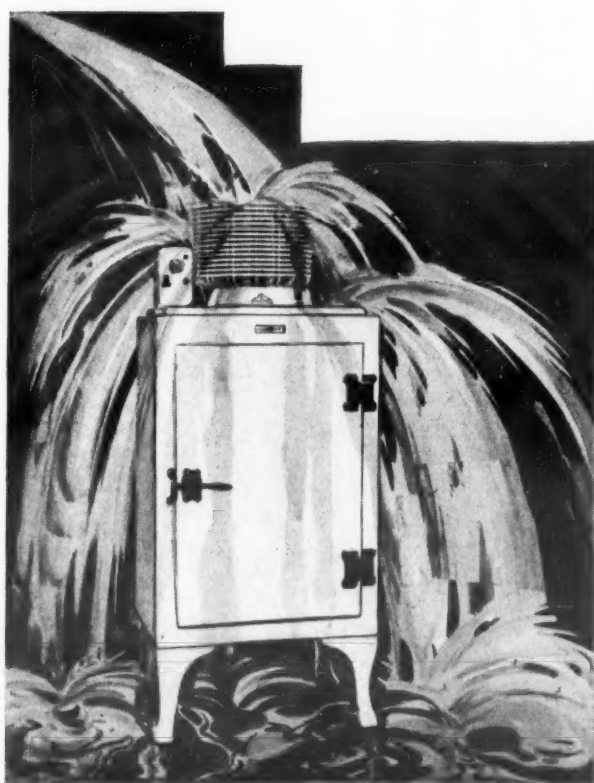
KELVINATOR OF CANADA, LIMITED, LONDON, ONTARIO

KELVINATOR LIMITED, LONDON, ENGLAND



# Barricaded with Impregnable walls of

# STEEL



*It is*

**WATER-PROOF**

AND

**MOISTURE-PROOF**

AND

**RUST-PROOF**

AND

**DUST-PROOF**

AND

**TROUBLE-PROOF**

AND

**WORRY-PROOF**

AND

**EXPENSE-PROOF**

NO owner  
has paid **1¢**  
for service

ELECTRIC REFRIGERATION DEPARTMENT OF GENERAL ELECTRIC COMPANY, HANNA BUILDING, CLEVELAND, OHIO

**GENERAL  ELECTRIC**  
**ALL-STEEL REFRIGERATOR**



## 18 YEARS OF SPECIALIZATION BEHIND THEM

**B**EGINNING with the introduction of flared tube fittings, this organization has majored on their production.

Since the birth of automatic refrigeration Commonwealth Brass fittings have been the preferred choice of leaders in the industry. Commonwealth Brass fittings meet every code requirement and are manufactured in every wanted size and dimension.

Hot forged or fabricated from extruded rod, accurately machined and carefully packed, these fittings are seepage-proof and

### CATALOG No. 36

describes the most complete line of fittings, especially manufactured for automatic refrigeration. Send for your copy.

COMMONWEALTH BRASS CORPORATION

Commonwealth and G. T. R. R.  
DETROIT, MICH.

**BUILT  
RIGHT  
TO STAY  
TIGHT**

## GEORGIA POWER STARTS ANOTHER BIG CAMPAIGN

Atlanta, Ga.—The sales organization of the Georgia Power Co. is again stalking old man quota in the spring refrigerator campaign, which opened on Monday, May 5, with a terrific onslaught on the \$850,000 quota. The Georgians are quite enthused over their latest campaign and their goal is to smash the quota before the drive comes to a close on July 3.

The campaign this year is being conducted as the "Georgia Power Company Band Wagon" tour, and will be a mythical race between old man quota on a motorcycle and the bandwagon. Throughout the state the two will race, the trail starting from Atlanta and going through every division and district headquarters. Progress of the bandwagon is being determined each day by the percentage of quota sold, while old man quota will move along in accordance to the quota that should have been sold.

Atlanta's quota for the drive has been set at the \$375,000 mark, while the outside districts have a \$475,000 bogie to shoot at. General Electric domestic and commercial equipment and Kelvinator commercial equipment are being pushed by the Georgians. Warren display cases and walk-in coolers are also being featured. Special prices and terms are being offered as inducements to buy now. Direct mail and advertising are carrying the message of refrigeration in the home and business.

### NEW YORK PASSES RULING ON CONDITIONAL SALES

Albany, N. Y.—Governor Roosevelt has signed the Pitcher bill, chapter 874 laws of 1930, amending the personal property law, in relation to conditional sale of goods and chattels, and repeal-

ing section 80-1 thereof, etc. Last spring there was a decision rendered by New York State courts, the effect of which was that gas ranges could not be removed from an apartment house, under foreclosure under a conditional sales contract. The effect of this decision meant, among other things, that a person who purchased a gas stove or an electric refrigerator and was not the owner of the realty, might find himself in the position of having added a permanent fixture to the realty which he could not remove.

The bill just approved by the Governor is said to overcome the court decision of last spring and to clarify the law generally.

## MILLS TAKES POST WITH PREFERRED UTILITIES CO.

New York, N. Y.—Frank W. Mills, sales manager of the Wayne Home Equipment Co., Fort Wayne, Ind., has resigned to become secretary and treasurer of the Preferred Utilities Co., eastern engineers and distributors of the Ray and Hart oil burners.

The Preferred Utilities has dealer or-



Frank W. Mills

ganizations in the principal towns and cities in New York, New Jersey, and the New England states. Mr. Mills will make his headquarters at the New York offices, located at 33 West 60th Street.

## PROGRESS PROMISED ON CHICAGO SAFETY CODE

(Concluded from Page 1, Column 3)

are engaged in a jurisdictional fight to obtain control over refrigeration installation work and, according to reports, threats have been made by both unions to the committee members.

"Dr. Kegel reported recently that threats had been made that he would be bombed unless he dropped one of his ordinances which would have halted the installation of large domestic refrigerator systems, and consequently taken work away from both unions. According to reports, Ald. Moran and Ald. J. H. Taylor [37th] also were threatened."

## REFRIGERATOR SHOW GOES OVER BIG IN PHILADELPHIA

Philadelphia, Pa.—Through the Electric Association of Philadelphia, the mechanical refrigerator buyer has an annual opportunity of seeing the best known makes of refrigerators displayed under one roof. This year the second annual Refrigerator Show was visited by more than 22,000 persons. Through the medium of over one hundred newspapers in the Philadelphia area, the story of this successful show was told.

The display was open every day, including Saturday, from 10 a. m. until 10 p. m., during the week of April 21 to April 26. More than sixty models were displayed by Copeland, Electrolux, Frigidaire, General Electric, Kelvinator, Merchant & Evans, Norge, Servel, Westinghouse and Zerozone.

The Philadelphia Electric Company offered the entire first floor of the Edison Building to the exhibition. This building is known throughout this area by its brilliant display of changing colored lights each evening. In an auditorium on the second floor, speakers well known in dietetic work addressed enthusiastic audiences each day. On Monday, Mrs. Katherine A. Fisher, of Good Housekeeping Institute, gave a talk on good health and better living. Mile. Pauline Bernege, Miss Vivian Schaal, Mrs. Anna B. Scott and Elizabeth S. McDonald spoke during the week.

Mile. Pauline Bernege, who is president of the League of Organized Housewives in Paris, described methods of household efficiency in modern Europe. Mile. Bernege is in this country to study

our methods of keeping the home healthy and happy.

"I have come to Philadelphia first in my tour of the United States because this has always been pointed out to me as one of the most progressive cities in the States," she said. "I am tremendously impressed by the remarkable strides America has made in inventing labor- and time-saving devices for making housework a pleasure to the modern woman."

"Truly the electric refrigerator idea is one of the greatest aids to the kitchen when it gives such tremendous advantages to the busy mother who wishes to keep her family healthy all the year round."

An average of 350 housewives attended these lectures daily. Music from the show was broadcast over station WFI, featuring Irving Oppenheim and his Concert Orchestra.

From the business end, the show was a marked success. Over 4,000 prospects were obtained and more than 125 sales made from the floor, although no attempt was made to close prospects at the time.

The executives responsible for the success of the show were: A. L. McMillan, manager of the refrigeration department of the Philadelphia Electric Company; R. A. Sholl, sales promotion manager for Judson C. Burns; Frank Pierce, sales manager for J. J. Pocock, Inc.; George Conover, managing director of the Electric Association of Philadelphia; Miss Clara Zillesen, advertising manager of the Philadelphia Electric Company, and Joe Neutra, of Shimmel Electric Company.

A recipe book, specially compiled for the Refrigeration Show, was given to every woman visitor.

"I have been an old subscriber and a new one 'till 1932—I appreciate your paper very much and congratulate you upon the success you so richly deserve."—Chas. L. Marshall.

## McCord Announces

### A New, Improved Spiral Fin Tube

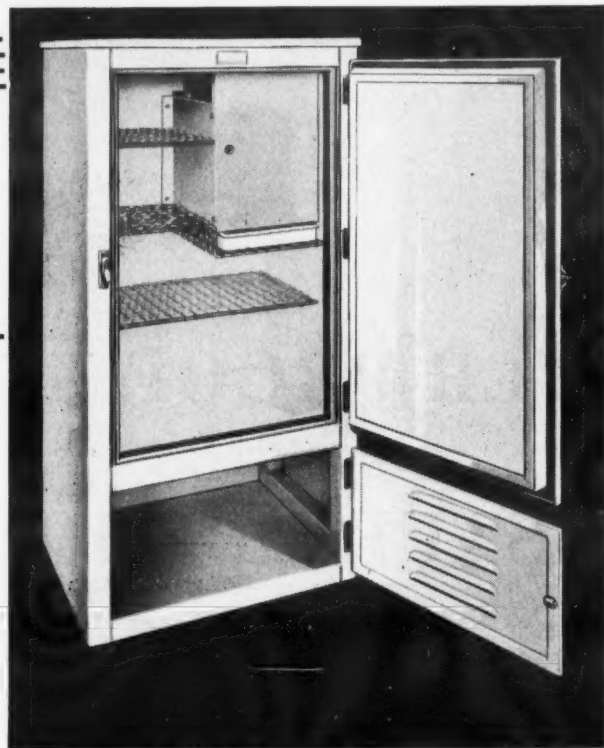
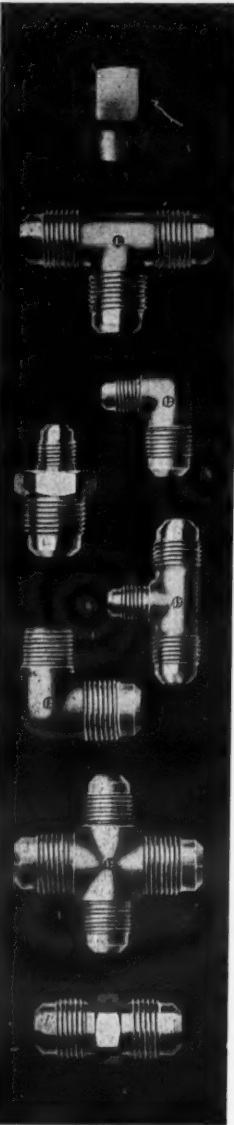
with a superior metal to metal contact developed by McCord, pioneer condenser maker. Continuous flat fin type, because the flat fin is the most efficient, gives a more even distribution of radiating surface, offers less resistance to air flow as well as overcoming the objection to dust collection.

McCord condensers are made of one continuous tube with no seams or joints to leak. Condensers are shipped dehydrated ready for service.

Following is a list of manufacturers using McCord condensers:

Westinghouse  
General Electric  
Kelvinator  
Williams Ice-O-Matic  
Copeland  
Rice  
Crosley  
Trupar  
Koldstream  
Sunbeam  
Potter  
Mechanikold

**MCCORD**  
RADIATOR & MFG. CO.  
DETROIT MICH.



**W**HATEVER your apartment refrigeration problem may be, there is an Alaska Cabinet to solve it.

Alaska Electric Cabinets "hold the cold." By means of perfected insulation they materially cut down refrigeration costs.

Besides the economy in operation, Alaska Cabinets offer several other desirable features such as: accessible,

commodious interiors—beauty of finish inside and out—fine hardware, as well as handsome appearance.

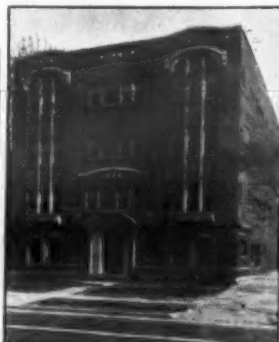
Note the high grade buildings in which Alaska Electric Cabinets are used.

Write us today for complete information regarding the entire line of Alaska Electric Cabinets.

The Alaska Refrigerator Corporation,  
Muskegon, Michigan



988 Park Ave., Woodcliff, New York 41 Alaskas with Frigidaire Units.



Rolyat Apartments, 1847 Taylor Road, Cleveland Heights, Ohio, 12 Alaskas with Norge Units.



87-89-91 Crooks Ave., Paterson, New Jersey, 18 Alaskas with Kelvinator Units.

# ALASKA

Perfected Insulation Cabinets

The Alaska Electric Cabinet is suitable to practically all types of electrical refrigeration



## REFRIGERATION MAKES GOOD SHOWING IN OMAHA

Omaha, Nebr.—The Junior Chamber of Commerce, A. J. Rhodes, chairman, did some real promotional work the week of April 21. One hundred windows in business buildings on the principal streets of the city had been pledged to Mr. Rhodes for the week. He then set about inducing the manufacturers of the city to make a window display for the entire six days. So successful was he that 103 displays were made.

Monday evening at eight o'clock, the grand opening was staged. Mr. Rhodes and other officials of the chamber took a trip in an airplane just a few minutes before that time. The plane carried a huge siren that could be heard all over the city. The plane also carried many colored lights. Just at the hour, the siren began its hubbub of noise, bands on the streets began to play and the windows containing the many factory displays were lighted almost simultaneously.

It was estimated that 60,000 people viewed the windows the first evening, while the average daily attendance was about half that number. Each factory making a display was assessed a small amount for general promotional expenses. In addition to this, the individual firms paid the expense of properly dressing the window. Some of those making very large displays got by with less than \$50.

Electric refrigeration was not "left in the cold" by any means. The IcElect Corporation had a window 16 x 8 x 8 in the Nebraska Clothing Company building. Here were three IcElect models, a cabinet, all the working parts of the refrigerator, and plenty of literature scattered over the floor. One of the cylindrical coils made by the IcElect Corporation for keeping ice cream frozen occupied one corner, while directly in the center of the window was a cut-out condenser, showing the regular flow of oil, in operation all the time. It was almost impossible to get close enough to this window at any time of the day or evening to see just what was happening. Albert Schneider, president of IcElect Corporation, said he would not take \$5,000 for the publicity thus obtained, although it cost the company less than \$50.

IcElect carried a large card in the window where that machine was displayed, which said foreign agencies were now in existence in eighteen foreign cities and named them. Some of the places mentioned were Johannesburg, Liverpool, Honolulu, Rio, Durban and Sydney.

The Baker Ice Machine Company also had a large window display in one of the big department store windows. Three of the smaller models of the Baker machine were shown, as well as several of the working parts. One of the machines was in actual operation most of the time.

The Nebraska Power Co. donated window display space to the Miller Cereal Mills of Omaha for use during "Know Omaha Better Week."

A small conveyor was installed in the rear of the display which picked up artificial snow (manufactured by the Miller Cereal Mills) from the floor and delivered it to a blower producing the realistic effect of a snow storm. The impression given was that the cold and snow was produced by the Kelvinator

cabinet in the wintry display, on which is a card reading, "Who Left That Kelvinator Door Open." The figure of an old man in the display presented the appearance of being pretty badly frozen from the cold from the open Kelvinator.

A second window of the Nebraska Power Co. showed Kelvinator and other products; a third was given over entirely to a showing of all the models of the Kelvinator line.

## Believe It or Not

PLAYING in a Serval executives' golf tournament at the Evansville Country Club on Saturday, April 19, A. J. Bodenmuller, of the general sales staff of Serval Sales, Inc., Evansville, Indiana, achieved the real distinction of making a hole in one.

Playing in the foursomes with Mr. Bodenmuller at the time were: Messrs. Townsend, Vining, Bodenmuller, Remsen, Conkey, Terrill, Bickel, Taggart, Collins, Teter, Hansen, Michael, all of whom testify that there was no "funny business" on the part of either Mr. Bodenmuller or his caddy, and that he is, therefore, qualified to join the Hole-in-One Club.

## KELVINATOR-LEONARD MEN DISCUSS SAFETY PROGRAM

Grand Rapids, Mich.—Kelvinator and Leonard officials met at a dinner here on April 17 at the Browning Hotel. The meeting was called primarily for a discussion of safety and welfare plans in the local factory. George W. Mason, president and chairman of the board of the Kelvinator Corporation, spoke at length, expressing the company's concern in this phase of work, and stated he has employed an expert on factory safety methods to head the safety department. Mr. Mason then introduced R. L. Roberts, safety engineer, who outlined his plans.

A. D. McCaughna, Leonard factory manager, and G. M. Evans, Kelvinator factory manager, urged full co-operation on the part of all foremen and department heads in seeing that the safety program was carried out. Assistant to the president, H. G. Perkins, was toastmaster and introduced the speakers.

Other officers present at the meeting were H. W. Burritt, vice-president, of Detroit; A. H. Jaeger, first vice-president of Leonard Company, and W. K. Smith, general superintendent. The meeting was an enthusiastic one, with a representation of more than 75 officials, including all of the various department heads and foremen. A general discussion followed the talks by the officials, and the safety plan was given a pledge of earnest support.

## PARSONS COMPANY HOLDS DEALER MEETING

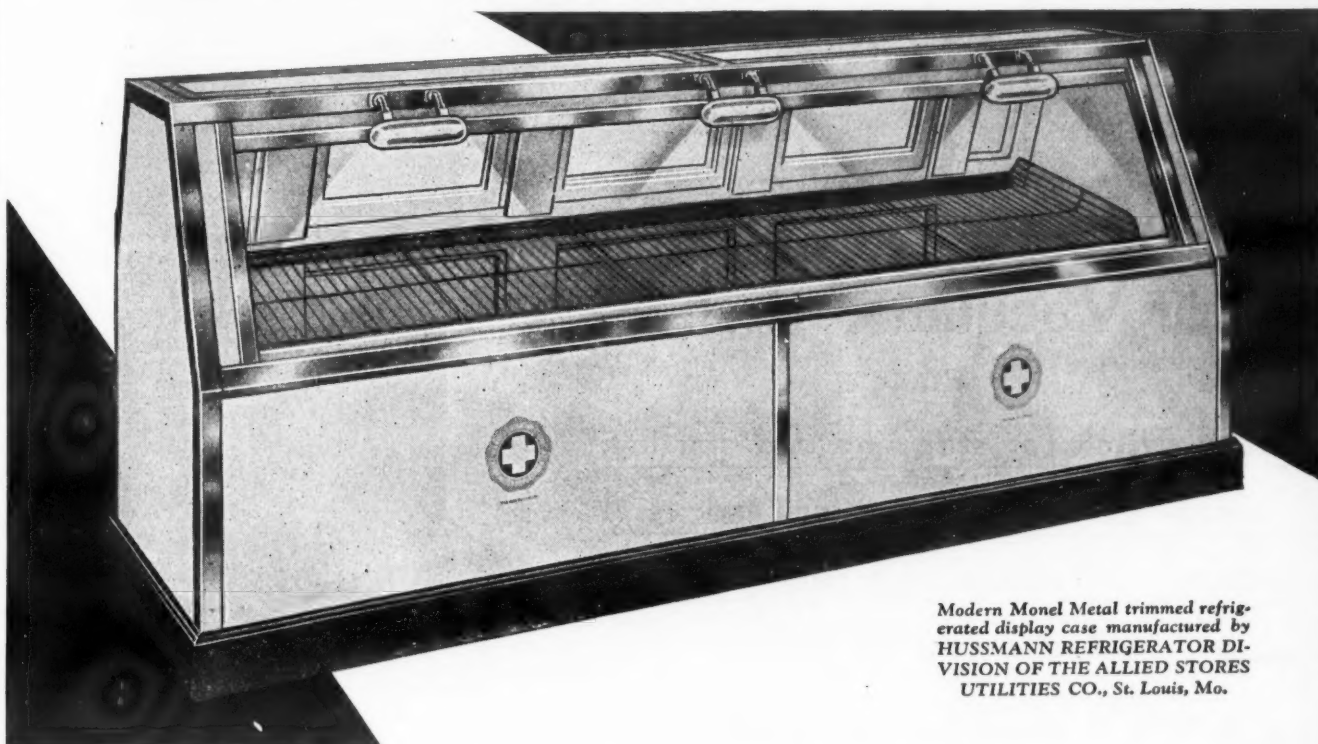
Kansas City, Mo.—The R. E. Parsons Electric Company held a meeting of 150 dealers and salesmen, April 15, at the Hotel Baltimore. This company is distributor for Frigidaire in 65 counties of northwest Missouri and northeast Kansas. R. B. Ambrose, zone manager, and W. E. Brown, assistant zone manager, factory representatives from Dayton, Ohio, were at the meeting.

## On the Home Grounds



IcElect shows its products to Omaha citizens.

## This SANITARY Nickel Alloy



Modern Monel Metal trimmed refrigerated display case manufactured by HUSSMANN REFRIGERATOR DIVISION OF THE ALLIED STORES UTILITIES CO., St. Louis, Mo.

Always looks bright and clean ... ALWAYS

RUST-immunity, resistance to corrosive action of food and fruit acids, ease of cleaning, enduring attractiveness—these are the advantages which have made Monel Metal the preferred material for modern refrigerating equipment.

Because Monel Metal has no coating to chip, crack or wear off, because it is solid throughout—like sterling—its beauty is permanent. Years of hard use in all kinds of refrigerating service leave its natural lustre undimmed.

The use of this silvery Nickel alloy for trim, trays and other

refrigerator parts has brought broader acceptance and increased sales for the products of leading refrigerator manufacturers.

The merits of Monel Metal are well known to users of refrigerating equipment, because the story of this remarkable material is being kept constantly before them by extensive national advertising which appears consistently in leading publications.

We will be glad to send you additional information about Monel Metal in refrigerating equipment service. Also write for new booklet, "The Cash Value of Attractive Appearance".

# MONEL METAL

Monel Metal is a technically controlled Nickel-copper alloy of high Nickel content. It is mined, smelted, refined, rolled and marketed solely by The International Nickel Company. The name "Monel Metal" is a registered trade mark.

THE INTERNATIONAL NICKEL COMPANY, INC., 67 WALL STREET, NEW YORK, N. Y.



## WATERS PURIFIERS

for individual coolers and circulating systems—will cure your water cooler troubles—will remove taste, odor, sediment, discoloration—low initial cost—minimum servicing requirements—made in four sizes—write for quotations.

**The WATERS FILTER AND COOLER COMPANY**  
148 CHAMBERS ST., NEW YORK, N. Y.



It not only filters—It purifies

## Fulco REFRIGERATOR COVERS

"FULCO" covers are used by those dealers who realize the importance of making deliveries in perfect condition—without scratches or broken enamel. For they know that complaints mean dissatisfied customers and loss of business.

"FULCO" covers are a real service feature that helps sales and holds trade.

Substantially constructed, heavily padded, box-shaped, providing perfect protection.

Give us the dimensions of your refrigerators, and let us quote special prices on your individual needs. Write our nearest house.

**Fulton Bag & Cotton Mills**

Manufacturers Since 1870  
ATLANTA · NEW ORLEANS · DALLAS · ST. LOUIS  
MINNEAPOLIS · BROOKLYN · KAN. CITY, KAN.



The fascinating story of Monel Metal—its properties and uses—is told in a new 2-reel motion picture film. Write for details of free distribution.

ON AND OFF  
IN A JIFFY





### **SPEED . . . plus SAFETY**

Quick deliveries are not usually safe deliveries, but the A.D.S. 145 Adjustable Refrigerator Cover guarantees a speedy, safe delivery of all makes of Refrigerators.

Carrying harness also Adjustable.

Manufactured by  
**Union Canvas Goods Co.**  
INCORPORATED  
1016-18 Hamilton Street  
Philadelphia, Pa.  
Address Inquiries: Dept. N.S.C.

## Prosperity of Whole Industry is Lindeman's Advertising Theme

TO the average man identified with the refrigeration industry it probably looks odd to see the names, Frigidaire, General Electric, Kelvinator and Servel occupying prominent places, in what later turns out to be a Copeland advertisement. But refrigeration men who know S. O. Lindeman, of Greensboro, North Carolina, will not be surprised. They have come to expect striking, attention-arresting material from Mr. Lindeman, who now represents Copeland in the southeast. This particular advertisement, published in a Greensboro newspaper, calls attention to the remarkable progress made by the entire refrigeration industry as set forth in

the April 9 issue of ELECTRIC REFRIGERATION NEWS.

Another example of Mr. Lindeman's novel methods of appeal is furnished by a handsomely printed booklet which he distributed through his territory recently. In it he dealt frankly with some of the problems which confront the refrigerator dealer and salesman. Some excerpts follow:

"The selling of electric refrigeration during the past five years can be looked upon only as a costly experiment, so far as many dealers and salesmen are concerned. No one person or group can be properly blamed for the losses that have been incurred, nor for the sales that have been made on a 'no-profit' basis. The business was new, and while the cost of manufacturing electric refrigeration could be quite definitely gauged in advance, the cost of 'selling' was wholly an unknown quantity.

make a satisfactory living selling electric refrigeration.

"Training salesmen is a costly proposition, and if satisfactory earnings could have been had by increasing the salesman's commission, a large portion of training expense could have been saved, because there would have been less turnover in the sales organization. It is believed by many that an increased commission to salesmen would have been less costly in the long run than the expense of continually training new men. It is certain that many men who withdrew from the business would still be selling electric refrigeration, and that the buying public, as well as the refrigeration industry itself, would have benefited, if the individual salesman's earnings had been of a satisfactory nature.

"Men in the factories can only be kept busy if dealers and salesmen secure a sufficient volume of business to keep the factory running.

"Refusing to recognize the rights of the dealer and salesman in the matter of proper remuneration for the effort put forth results in bringing about a large number of 'mortalities' in the business world.

"Dealers when unable to secure proper return on their investment, automatically pass out of the picture, and individual salesmen who are not able to earn

# Announcement from The PENN Laboratories

## Type J

### Temperature, Pressure or Vacuum Switch

with

Hand switch for stopping and starting.

Thermal Overload protection and reset

button. Differential and range adjuster.

Quick-Freeze Control.



**N**OW you can concentrate the control of your electric refrigeration system into one compact instrument—the Penn Type J. This highly perfected controlling device, which performs the operations of several switches, is designed with bayonet type contacts for accessible and quick wiring, eliminating the necessity of entering the switch. The simple mounting, too, may be done quickly and is ever accessible.

Penn Type J is provided with an outside temperature selector, differential and range adjuster, thermal overload protection and a hand switch for starting and stopping to defrost, reset, etc. The outside temperature selector does not alter the original factory setting, and may be used to raise or lower the temperature approximately 5 degrees. The thermal overload protection is so designed that it compensates for changes in room temperature, assuring highly accurate protection.

In addition, the Penn Type J simplifies the inward mechanism through the use of one dial control. Through this dial, the unit may be stopped and started and also give

a variable of 8 to 10 degrees in change of temperature.

The Penn Type J Switch is unusually suited to domestic units, because of its neat appearance, compact construction, and silent operation. It is finished with a Bakelite case of high dielectric strength, practically air-tight, and vapor-proof. It is not affected by either vibration or movement, and operates entirely without the use of mercury tubes. It contains the original Penn Magnet Structure, used for many years in the present well-known line of Penn Temperature Controls.

It can be supplied with a wide range of temperature control from 20 degrees below zero to 40 degrees above, and corresponding pressure ranges with minimum differential of 5 degrees or maximum of 30 degrees, and corresponding pressure differentials over entire range. It is rated for a maximum of 1/3 H. P., A. C. or D. C., and can be supplied in various models for special applications. Write today for complete information and specifications.

PENN ELECTRIC SWITCH CO., DES MOINES, IOWA

Manufactured by an organization of proven engineering ability that supplies the largest and best concerns of the country with Automatic Control Switches.

**PENN ELECTRIC SWITCH CO.**  
DES MOINES, IOWA

## 900,000 Electric Refrigerators Will Be Made and Sold in 1930

According to the Electric Refrigeration News the close of the first quarter of 1930 finds the electric refrigeration industry one of the brightest spots in the nation's business picture.

Reports from the leading electric refrigerator manufacturers show that sales for the first three months of 1930 are far ahead of the first quarter of 1929, and that the swing is still upward.

According to the best available figures 630,000 electric refrigerators were sold during 1929, and it seems safe to predict that a total of 900,000 units will be sold during the present year.

### FRIGIDAIRE

According to E. G. Biechler, President and General Manager of the Frigidaire Corporation, all first quarter production records were broken at the Frigidaire factory during the first three months of 1930. Mr. Biechler says that more men are being employed than ever before at this time of year.

### SERVEL

V. E. Vining, Sales Manager of the Servel Company, states that in 1929 their business showed an increase of 171% over 1928 and for the first three months of 1930 their orders showed an increase of 148% over 1929.

### GENERAL-ELECTRIC

Records indicate that General Electric Refrigerator sales were 50% ahead of the record for the first three months of last year.

The General Electric officials state that the big quotas which were set for 1930 are being maintained by the General Electric sales force scattered throughout the country.

### KELVINATOR

According to H. W. Burritt, Vice-President of the Kelvinator Corporation, March was the greatest month in the history of that Company, shipments during March being the largest ever made in one month.

## COPELAND

The month of March was the greatest month for sales in the history of the Copeland Sales Company. This company entered April with four times as many unfilled orders on hand as on the first day of any previous April in its existence, according to W. D. McElhinny, Vice-President of the Copeland Company.

Copeland sales for the first three months of 1930 were 140% ahead of sales during the same period last year.

Copeland is recognized as one of the outstanding successes in the electric refrigeration industry.

### Copeland Features

**Water Chiller**  
Copeland Deluxe models give a plentiful supply of properly chilled water.

**Cold-aid for Faster Freezing**  
At top of ice cube chamber—easily available.

**Vitalizer**  
Made of high grade porcelain. Crips lettuce, celery, radishes, tomatoes, etc.

**Cold-Hold**  
Acts as a storage battery and supplies low temperature in case current is cut off.

**Electric Light**  
Copeland Deluxe models are electric lighted. All food space clearly visible.

**Ice Cubes**  
From two to four times the number of ice cubes usually supplied.

**Food Storage**  
Comparing size of cabinet, Copeland gives maximum food storage capacity.

**Prices**  
Size for size and quality for quality, Copeland Electric Refrigerators are low in price.

**Terms**  
Terms will be made to suit your needs and convenience.

**Radio Sales & Service Co.**  
Distributors

610 N. Elm Phone 7813

This advertisement is published for a two-fold purpose.

First, it is intended to induce Greensboro citizens to visit the showrooms of the Radio Sales and Service Company at 610 North Elm Street and inspect the Copeland models there displayed.

Secondly, it is directed to mercantile establishments throughout the Carolinas, with the view of inducing inquiries regarding exclusive Copeland territories which are still available to responsible concerns. Such inquiries should be addressed to S. O. Lindeman, Greensboro Bank Building, Greensboro North Carolina.

*S. O. Lindeman*

"Discounts allowed to dealers were at a point that made it necessary for the dealer to pay the retail salesmen only a very nominal commission. Retail salesmen, in hundreds of instances, were unable to secure a satisfactory income on the basis of commissions paid. This condition resulted in a tremendous turn-over in the retail sales force; men coming into the business, receiving sales training and leaving the business when it became evident that satisfactory returns could not be had for the effort put forth.

"There are literally hundreds (and perhaps thousands) of well trained refrigeration men in the country today who are engaged in other lines of business, simply because they could not

a 'living wage' are ever changing their business connections in an effort to locate an opportunity that will be sufficiently remunerative to enable them to live at least in comfort.

"It would appear, therefore, that the best interest of all people are conserved only when manufactured products are sold at a price that includes the cost of the raw material, plus the cost of labor at fair prices, plus a profit great enough to pay the manufacturer a reasonable return on his investment, and plus a profit for the dealer sufficient to enable him to render proper service to his customers and to pay the individual salesman a commission of a size that will enable him to earn a satisfactory living."



## ATLANTA MEETING

(Concluded from Page 1, Column 5)

well received by the engineers, due to the fact that at the present time much consideration is being given to equipment for the new products that are winning favor in many sections of the country.

The program for the Thursday and Friday morning sessions is as follows:

THURSDAY, 9:30 a. m. Second Session.  
REFRIGERATING MACHINERY AND EQUIPMENT

"Automatic Refrigerating Controls." C. P. Goree, Jr., Frick Company, Atlanta, Ga.

"Tests on Refrigerating Low Sides." F. E. Stewart, Associate Professor, Dept. of M. E., Georgia School of Technology, Atlanta, Ga.

"Engineering Development Procedure and Organization Responsibility for Electric Refrigerator Production."

M. C. Terry, Chief Engineer, Refrigeration Div., Westinghouse Electric & Manufacturing Co., Mansfield, Ohio.

"Vacuum as an Insulator." C. O. Duevel, Jr., Research Director, American Thermos Bottle Co., Norwich, Conn.

"Application of the A. S. R. E. Refrigerator Test Code." R. T. Frazier, Tennessee Furniture Corp., Chattanooga, Tenn.

Friday, 9:30 a. m. Third Session.

## REFRIGERATING PLANTS AND APPLICATIONS

"Aspects of Refrigeration in Candy Manufacture." Tresper Clarke, Chemist, Nunnally Company, Atlanta, Ga.

"Frozen Fruits a Factor in Marketing Surplus Products." W. R. Tucker, Agricultural Development Agent, Atlanta, Birmingham and Coast Railroad, Atlanta, Ga.

"Value of Uniformity in Plant Design." E. K. Strahan, Consulting Engineer, New Orleans, La.

"Some Railroad Problems in Perishable Shipment." A. J. Lorion, Freight Container Bureau, American Railway Association, New York, N. Y.

"Practical and Ideal Refrigerants." J. B. Churchill, Consulting Engineer, New York, N. Y.

Members of the society, their wives and friends, will have the opportunity to take in a number of side trips during their sojourn in the city. Tours to a number of historical spots nearby Atlanta have been arranged by the committee for the guests.

## REFRIGERATOR SALES KEEP SCHUSTER MEN BUSY

Milwaukee, Wis.—The Edward Schuster Co., one of the largest department store organizations in the middle west, with three stores in this city, are doing a large business in Servel and General Electric refrigerators.

Frank A. Jones, manager of the re-

frigeration departments for the three stores, states that all prospects are secured on the sales floor, and in one recent month enough were secured to keep one salesman busy for the balance of the year. Mr. Jones states that more and more buyers of mechanical refrigerators are coming direct to the stores to purchase, much as they would a mattress or perhaps a pillow case. The refrigerators are so well advertised that everybody seems to know a great deal about them. It is not at all unusual for a customer to come into the store, look at a machine for a few minutes, and write out a check forthwith. There is in this way no evening call to make to the home and no sales resistance. Of course, certain prospects have to be followed-up. Recently, the Schuster Co. used three of its large windows for an electric refrigerator display.

Mr. Jones also stated that peculiar as it may sound, quite a few sales of electric water coolers have recently been made to private homes. A case in point is that of a lady who saw the cooler on the floor, asked the price, and had one delivered the same day.

In a yacht being built at the present time for Ralph Friedman, one of the Schuster Co. owners, a special Servel job is being installed.

Floor salesmen of the Schuster refrigerator departments are permitted two days a week on outside work, the balance of the time being spent in the store. Mr. Jones states that several employees in other departments have recently made application to him to be transferred to his section. They are extremely interested in the future of mechanical refrigerators.

## FERRO MEN GIVE TWO TALKS

Cleveland, Ohio—Conrad Givens, representative of The Ferro Enamel Supply Company, addressed the ceramic students at Alfred University, Alfred, N. Y., on April 7, and also showed the films on modern methods of porcelain enameling taken in the plants of several large companies.

R. A. Weaver, editor of "The Enamelist," spoke before the meeting of the Sheet Metalware Association at the Hollenden Hotel, Cleveland, April 22, on the subject of a Co-Operative National Advertising Campaign by enamelware manufacturers.

## SERVEL PLACES EQUIPMENT IN VETERANS HOSPITAL

Little Rock, Ark.—Installation has recently been completed of eight 7-cubic feet Servels in the United States Veterans' Hospital at North Little Rock.

This installation is one of a considerable number of Servel purchases by the Veterans' Bureau for hospitals in various sections of the country.

## STITZ JOINS COPELAND ON PACIFIC COAST

Portland, Ore.—Ernest Stitz has joined the Harper-Meggee Company in capacity of city sales manager, and will supervise Portland sales of Copeland refrigeration.

## Feverish Selling

Dayton, Ohio—Stories of how two Frigidaire salesmen failed to stop work even when confined in hospitals, are being told around the general offices here.

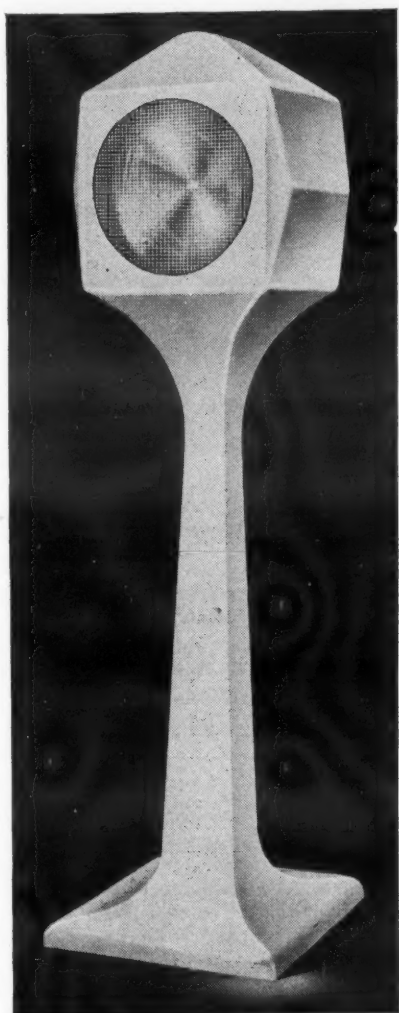
John H. Hunter, dealer at Brownsville, Texas, wrote: "I am sick in bed and that leaves no prospects but the doctor. Enclosed you will find order that I got from him. Please ship at once as it is for immediate installation."

Recovering from an operation, W. F. McDowell, of the Lexington Refrigeration Co., Inc., Lexington, Ky., sold a household model to Mrs. V. M. Allender, also a patient in the same hospital.

## NEW TYPE OF AIR COOLER MARKED BY PEERLESS

(Concluded from Page 1, Column 3)

of machine in common use today. The same has been true of air-cooling. Only the larger industries could afford the investment in machinery required. Today air-cooling is available to the average store, office and home. The bulky



New Peerless Pedestal Type Air Cooler

machinery, ducts, fans, etc., of the older type of equipment have been entirely dispensed with. The refrigeration is applied direct to the room to be cooled, with the consequent saving in installation and operating cost."

## NAMED WESTINGHOUSE SALES PROMOTION MANAGER

Mansfield, Ohio—S. H. Pittman has been appointed manager of the Sales Promotion Section, Domestic Appliance Department, Westinghouse Electric and Manufacturing Company.

Mr. Pittman graduated from the Rose Polytechnic Institute at Terre Haute, Ind., in 1922. He came directly to Westinghouse to take the graduate student course, and later went to the New York advertising office.

In 1924 he was made advertising manager of the Cincinnati office, and, in October of 1928, left Westinghouse to work for a Terre Haute advertising agency. Later Mr. Pittman joined the advertising staff of the Cincinnati Post, but left that position to return to Westinghouse.

## DOHERTY SALES SHOW STEADY GAINS

New York, N. Y.—Sales of electric refrigerators during the last four years, 1926-29, by the subsidiaries of the Public Utilities Division of the Henry L. Doherty & Co. reached a total of 25,306 units, of which it is estimated that approximately 76 per cent were domestic type units. Sales reported for the various years are as follows: 1926—4,304;

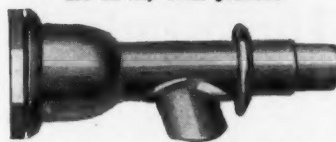
1927—5,783; 1928—6,445, and 1929—8,774.

The Toledo Edison Co. tops the subsidiaries in the four years' sales, having installed 8,105 refrigerators, 2,465 of which were placed during the last year. Following the leader closely is the Ohio Public Service Group with sales during the four years reaching a total of 7,582 units, 2,413 of which were sold during 1929. The per cent of customers sold during the four years reaches the 6.37 mark, the subsidiaries serving 396,727 customers. It is interesting to note that the refrigerator sales by the member companies during 1929 showed consistent gains in every city.

During the month of February of this year 357 refrigerators were placed by the subsidiaries to bring the total for the first two months up to 578.

## DRINKING WATER FAUCETS

for Refrigerators — Water Coolers  
New model now available for use on city water pressure

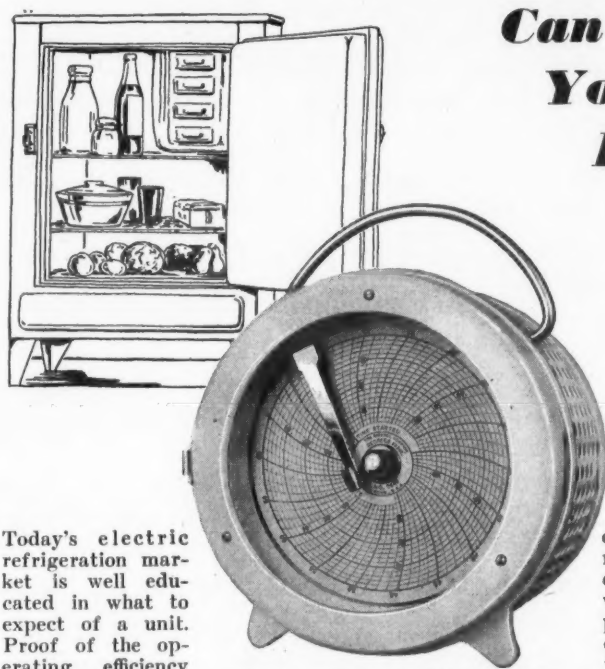


CORDLEY &amp; HAYES

147 Hudson Street New York City

## How Cool Is That Cooling Chamber...

Can You Really Tell?



Bristol's Handy Recording Thermometer for atmospheric temperature is 6 inches in diameter, uses 4-inch diameter chart. Case is aluminum alloy, white enamel finish.

Today's electric refrigeration market is well educated in what to expect of a unit. Proof of the operating efficiency is imperative... prospects or users must know that at all times right temperatures are maintained.

How cold—can be answered emphatically by placing in the cooling chamber Bristol's Handy Recording Thermometer. This instrument, with the

continuous 72-hour record, automatically records any variation in temperatures which occur, and writes the complete refrigeration story on the chart.

The Recording Thermometer furnished calibrated

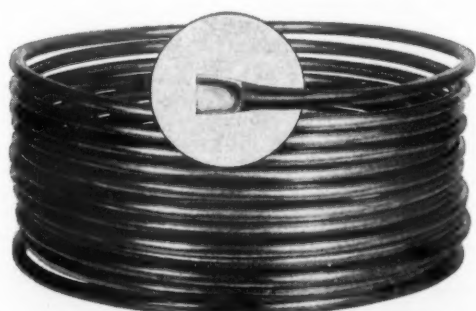
to use with chart having range of 30 to 70° F., has been found to be most suitable for refrigeration requirements. Instruments made up this way are carried in stock for prompt shipment.

For further detail, description and prices, write for Bulletin No. 377

## THE BRISTOL COMPANY WATERBURY, CONN.

## DEHYDRATED WOLVERINE SEAMLESS COPPER TUBING

Highest quality seamless copper tubing—perfectly dehydrated and solder-sealed—made to A. S. T. M. Specifications (B 68-27T)—ready for quick installation. Send your production requirements for quotations—or wire for rush shipment from stock.



## WOLVERINE TUBE CO.

SEAMLESS COPPER BRASS &amp; ALUMINUM

1431 Central Ave. Detroit, Mich.

Phone Cedar 5000

Sales offices in all major cities. Write or phone for name of nearest representative.

## RECO ELECTRIC MILK COOLING CABINETS

The "Toughest" and "Cleanest" Cabinet Ever Built for the Dairy

Electric refrigeration dealers selling Reco Milk Cooling cabinets this year will find these sales to represent unusually PROFITABLE BUSINESS.

For here is a "boiler plate" cabinet that sells itself—stays sold, and ever after becomes a potent factor in creating prospects and sales.

Note the cabinet construction briefly described below, then write us for further information and for sales proposition.

## CABINET CONSTRUCTION

Exterior of Cabinet—Steel boiler plate 5/32" thick, welded water-tight.

Interior of Cabinet—Lined with extra heavy copper alloyed steel.

Meeting Rail—(Around upper rim of cabinet where cans usually strike when loading cabinet.) Extra heavy steel channel 5/32" thick, welded at corners.

Insulation—3" cork board sealed in.

Cover—Split, with one end fastened down so machine can be mounted on top if desired. Insulated with 2" of an extra light weight material and sealed in. Covering is extra heavy copper-alloyed steel.

Cooling Coil—Made of best quality extra heavy refrigeration tubing. (Ammonia coils furnished on special order.)

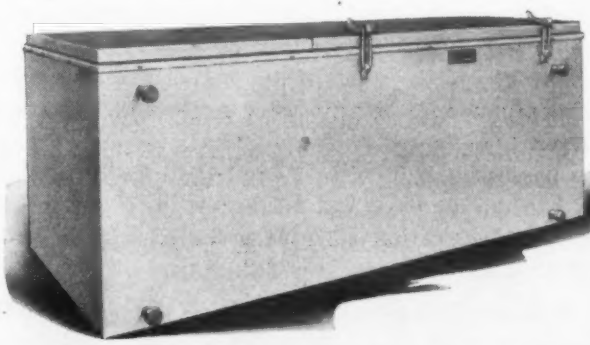
Coil Supports—Basket type rack made of galvanized strips 1 1/2" wide and 3/16" thick, welded. Easily cleaned.

Circulating Water Outlets and Inlets—1/2" and 1" galvanized pipe, one upper and one lower, mounted each side of front of cabinet.

Overflow Pipe—Combination drain and overflow located inside of cabinet.

One-inch galvanized pipe.

Finish of Cabinet—Special heavy-body enamel. Color—Sea Green.



Standard 6 Can Reco Cabinet

Operates with any type of Electrical Refrigeration Units

## DOMESTIC UTILITIES

Division Refrigeration Corporation of Maryland

Offices and Plant—Garrison Boulevard and Western Maryland R. R.

BALTIMORE, MARYLAND



# ELECTRIC REFRIGERATION NEWS

The Business Newspaper of the Refrigeration Industry

Published Every Two Weeks by

BUSINESS NEWS PUBLISHING CO.

550 Maccabees Building, Woodward Avenue and Putnam Street  
Detroit, Michigan. Telephones: Columbia 4242-4243-4244

Subscription Rates:

United States and Possessions: \$2.00 per year; three years for \$5.00  
All Other Countries: \$2.25 per year; two years for \$4.00

Advertising Rates on Request

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Phone Lexington 9113

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VOL. 4, No. 18, Serial No. 94

May 7, 1930

## The Standard Safety Code Emerges

THE meeting of the American Society of Refrigerating Engineers now in progress at Atlanta, comes just at a moment when the Society is nearing the completion of one of its most difficult tasks. The Standard Safety Code for Mechanical Refrigeration has been moving along without getting anywhere for so extended a period that its own safety became a matter of grave doubt.

It looks now as though the Code had finally emerged from the darkness into the light of day, and is ready to get to work at the job for which it was designed. How many cities and towns will seize upon it as the answer to their refrigeration problems is a matter that only the future can decide, but Harry D. Edwards, president of the A. S. R. E. and his associates, are pledged to the task of publishing it to the four corners of the land, and giving every municipality, that is considering the adoption of a refrigeration code, a chance to act upon it.

No one, not even its most ardent sponsors, claims that the Standard Safety Code is as good as they would like to see it. Like the Constitution of the United States, it harbors a number of compromises. But even those whose support is lukewarm, admit that it is the product of a long and arduous period of hard and faithful work by the men who are responsible for it as it stands today.

Once approved by the A. S. A. it will have to stand the severe and unrelenting test of experience. It may succeed and it may fail but it deserves a fair trial.

## As Others See Us

IF Robert Burns were selling refrigerators today his famous wish might be gratified. In an adjoining column is an article quoted from the Talking Machine and Radio Weekly, which tells of the writer's adventures in purchasing a mechanical refrigerator. It makes interesting reading from start to finish even though now and then the poor refrigerator man may feel that he really can't be as bad as all that. He must have some good points or he wouldn't be allowed to live.

And after all, it is a good thing now and then to find out what the other fellow thinks of us. We all have our faults and any industry as new as the electric refrigeration industry is bound to have plenty of them. There just hasn't been time to get rid of them. The industry has been going along so fast, the demand for electric refrigeration is so great that it has been necessary to train men too quickly, to rely too much on their native ability, to give them a few brief instructions and turn them loose on an unsuspecting public.

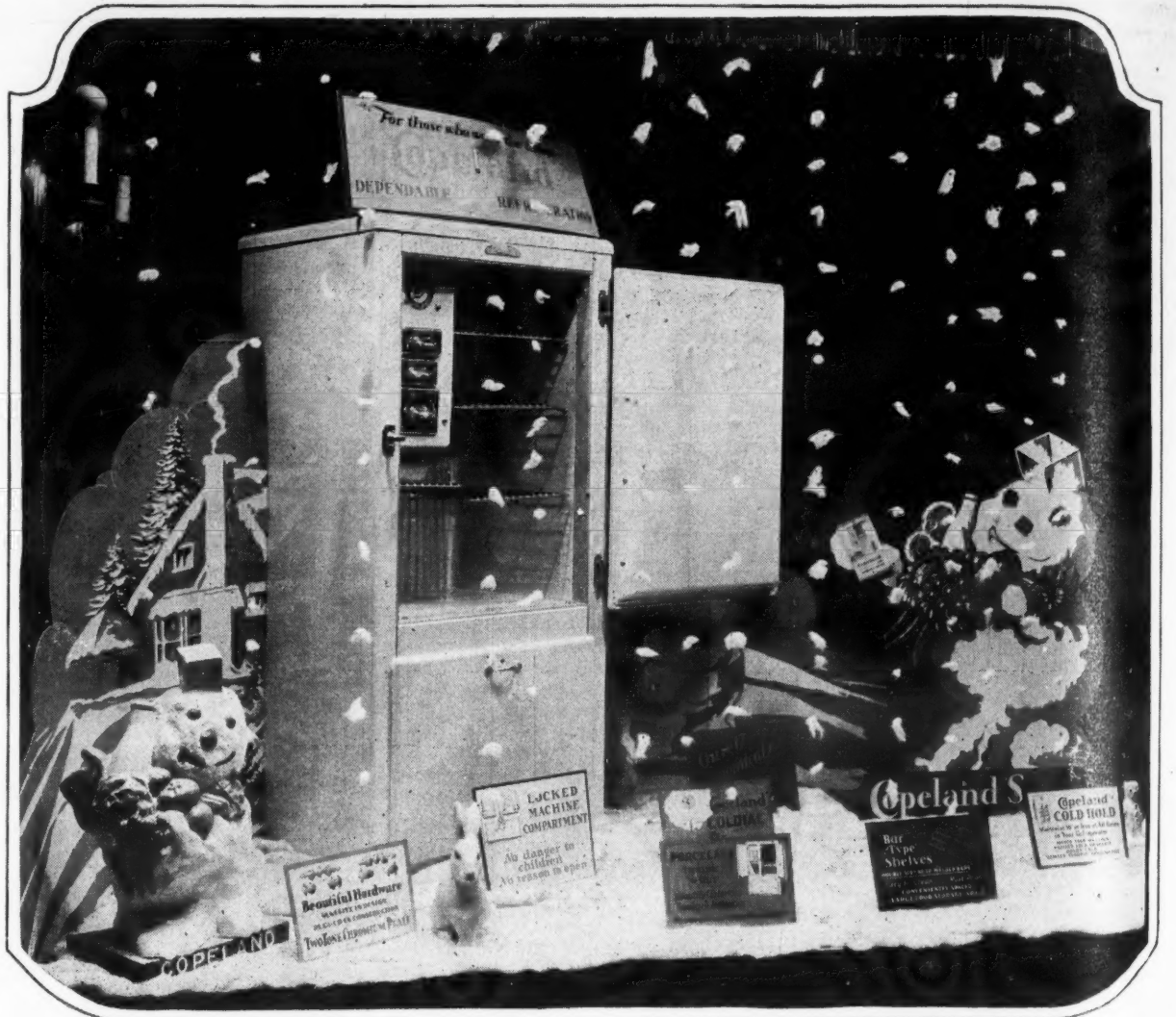
But that is all being changed. The refrigeration salesman of today is a better man than the refrigerator salesman of yesterday, and he will be even better trained tomorrow.

In its last two issues, the News published a number of quotations from statements made by the leading General Electric refrigerator salesmen, in which they described their methods of work. There was a lack of uniformity in those statements of method that might prove alarming to a martinet. He wouldn't understand how a group of men pursuing so many different roads could all achieve about the same measure of success. But to the man whose mind is more flexible, there is real promise in that diversity of method. It proves conclusively that refrigerator salesmen have minds and are not afraid to use them; that they possess ingenuity and employ it freely in their daily work; that they can devise ways and means to sell their product that are keeping electric refrigeration sales at a high peak when other businesses are stumbling along hoping for better times.

The refrigerator salesman is not perfect. He admits that himself. The writer of the article in the next column put his finger on some weak spots; he encountered the type of salesman who is distinctly not a credit to the industry, and we believe not typical of the industry as it is organized today.

Just one thing more. In telling of his distressing experiences in buying a refrigerator the gentleman gives the refrigeration industry credit on just one count. He says the dealer was sensible enough to take the unsatisfactory refrigerator back. Later on, he says buying a refrigerator is like having a baby. There's something wrong there. Not even a radio expert can send a baby back.

## Copeland Snowman Goes to Work



THAT latest personality in advertising, Copeland's "Snowman," is evolving new ways of keeping himself to the fore, both in the salesroom and in display windows. His latest task is not only to be a part of the display in the show windows of the Radio Electric Store, Copeland dealers in Springfield, Ohio, but to be of mechanical assistance. The Radio Electric Store recently dressed up its windows to introduce the

Copeland 1930 line to Springfield citizens. An exterior snow scene was employed. Mr. Snowman played a cheerful part, holding a selection of refrigerator contents in one arm, the while he wagged the other up and down and peered through a screen of cotton snowflakes.

Carl W. Windt, sales manager, felt the Snowman was doing less than he might. So he rigged an extra cord from Mr. Snowman's waving hand to a string

across the top of the window, from which depended the cords holding the imitation snowflakes. Then he set Mr. Snowman in motion again. The result was as blizzardy looking a snowstorm as was ever produced in or outside of an Uncle Tom's Cabin production. The realism of the artificial snowfall and the effectiveness of the display attracted considerable attention to the window and the product it advertised.

## RADIO PUBLICATION TAKES REFRIGERATION TO TASK

Would Improve Sales Methods

IF a large part of the radio business is soon to go refrigeration—as the aggressive plans of important producers would indicate—a trifle of first-hand evidence may be welcome. The trifle shows that, without regard to whether electric ice-boxes can be made and sold radio-wise, a rather helpless job of it is being done by those whose chief ambition in life just now is to sell that product.

Seven weeks ago this writer ordered for use in the city a standard electrical refrigerator priced at several hundred dollars. Inasmuch as a voluntary choice had been made, very little persuasion was needed in the salesroom but, without being asked, the floor salesman volunteered a bit of information, as the buyer was stalking out the door, which was to react disastrously on the transaction. "Remember," he said, "our refrigerator is the only one that does not interfere with radio." But it did.

Next, it became apparent that deliveries of the appliance which had been chosen are made on only two days of the week and, by a stroke of rare merchandising genius, one of these days is the day which in 95 families out of 100 is laundry day and the other day is the day which, with 95 out of 100 families employing a single servant, is the maid's day out. The only two worse days of the seven, for outsiders to invade a kitchen, are Saturday and Sunday. But at length the refrigerator came. The gentlemen who brought it went. They did not trouble to hook it up, for the only wall outlet not in other kitchen use was six feet away, the other side of a door, and it would have been necessary to string another outlet. "That's not our job," said the delivery boss. "Get an electrical contractor." Now, there are so many pleasanter things to do than look up an electrical journeyman, for the average family, that it was three days before one was unearthed to run an outlet to the box, very reasonably costing \$2.20, material and all. The point is that a several hundred dollar purchase was left cold, and not cold enough for use, at that, while the happy owner tried to find out how to make it go.

Through technical causes having to do with a direct-current neighborhood, electrical refrigeration froze itself out in the case in point. No possible fault was to be found with the product—it was like one of the times when a good radio set simply will not work well in a given locality—and the sellers showed a burst

of merchandising speed by promptly and politely taking back the sale.

A gas job was ordered next, and in this regard let us observe that if you think you can go anywhere and pick up power refrigeration and use it that night—like you buy pretty nearly anything else—you are the kind of a fellow who would expect an old master to have wet paint on it. Every chill salon says four or five days are required for the delivery and from three hours to three days for making the necessary connections and trial spins. It is like having a baby. The gas-box salesman and technical crew measured the kitchen for water and gas piping like investigators for the District Attorney measuring the scene of a murder. But they guessed wrong, for when the chest was delivered, a wall-box for the electric annunciator that signals kitchenward prevented the ice-box from being pushed flush against the wall. So it was left standing without connections for two days, and then temporarily connected for a week at half-steam, so to speak, only partially freezing ice, until the boys got around to moving a small wooden call-box six inches higher up on a kitchen wall. Incidentally, both these deals were ordered on a C.O.D. basis; it is curious to think what selling is done to time payers—or maybe they get a better break.

A worm's-eye view of the refrigeration market is that the lads who are peddling it have done a splendid job of arousing consumer demand and convincing the public of qualitative merit in the several lines currently popular. But they are as weak as the Bloomer Girls' outfield in installation and any necessary service. If the latter elements are inconsequential, no motor car dealer ever snatched a sale by letting you have his last demonstrator for a special party and no radio merchant ever cleared his floor by guaranteeing at noon reception of the Tunney-Dempsey fight that night.

Power refrigeration in all essentials is as fundamental to modern comfort as radio. It appears to be on the eve of the large expansion that comes from multiplied competition with attendant new economic standards, contentious policies of service and sales promotion, all tending toward a bigger though not necessarily a more profitable market. In the period beginning 1914, an annual sale of talking machines was realized for a number of makers many times greater than the annual gross in instruments for the original old trio, Victor, Columbia and Edison. From the year 1923, when more than a handful of radio manufacturers engaged permanently in supplying new demand, the movement of sets began to be counted in millions a year. They say that only 600,000 power ice-boxes were sold by all makers in 1929. Maybe a new epoch for that utility dates from here. April 23 issue, *The Talking Machine and Radio Weekly*.

## RENTED REFRIGERATOR MAKES ITS APPEARANCE

Evansville, Ind.—The individual or family who rents a house or apartment is keenly appreciative of every modern home comfort. Enterprising business men here are building up a wider field of demand for electric refrigeration—the rented unit.

"Why not rent an electric refrigerator just as you would a piano or the house itself?" reasoned Charles Hartmetz, a local restaurateur and real estate man. "There is a considerable number of people in most any community whose stay at one address may be of indeterminate period. They will appreciate the value of electric refrigeration service when they will not consider outright purchase of a unit."

F. C. Rhodes, manager of the Frigidaire department of the Stahlschmidt Piano Company, furnished forty Frigidaire units purchased by Hartmetz who is reported to be meeting with satisfying success with his plan. The forty units are of various sizes to meet individual family and home requirements. A charge of \$5 per month is asked from the rental customer for use of the unit.

## COMMONWEALTH EDISON SALES GOOD IN 1929

Chicago, Ill.—Electric refrigerator sales by the Commonwealth Edison Co. during the year 1929 reached the \$700,000 mark, making this appliance the third highest in ranking according to dollar value.

## NET MERCHANDISE SALES 1929

Domestic Appliances.....	\$1,281,830
Radio.....	912,580
Refrigerators.....	700,000
Cleaners.....	631,700
Portables and Shades.....	366,670
Washers.....	205,600
Supplies.....	99,240
Commercial Appliances.....	99,060
Toys.....	83,800
Fixtures.....	62,620
Miscellaneous.....	65,390
Total.....	\$4,508,900

## UTILITY MAKES CHANGES IN PERSONNEL

Hoboken, N. J.—J. Chambers has been recently made agent of the local office of the Public Service Electric & Gas Co., replacing R. E. Lohman, who is now agent of the west New York office of the same company.



*Your Trade Has Been Waiting For This*

# NOW! ELECTRIC REFRIGERATION

BY AN OLD ESTABLISHED MANUFACTURER

*to Retail for*

**\$149<sup>50</sup>**

**NEVER BEFORE A PRICE LIKE THIS**

**NEW! But Time Tested**

Give Us a Job That Will Sell for Less Than \$150.00!

For years Dealers have challenged us to do it.

So we set out to develop a real electric refrigerator that would meet this huge demand.

**AND NOW! HERE IT IS!**

Built to the uncompromising ZEROZONE high standard of quality, here is a package job that combines all the latest features, yet is priced so low that it will sell like hot-cakes.

NOT AN EXPERIMENT but a gradual development through years of research by ZEROZONE engineers. With these men ZEROZONE is no new thing. We've done it—we're not just talking about it.

PRECISION BUILT throughout, ZEROZONE will give a lifetime of quiet, economical refrigeration service.

**HERE'S THE PROOF!**

Many millions of dollars' worth of ZEROZONES are NOW in use in all sections of the country and are giving outstanding service under every climatic condition.

EVERY HOMEOWNER has been waiting for this ZEROZONE. Get in early and capture the cream of EASY SALES and BIG PROFITS.

**A Limited Number of Direct Franchises Are Now Open to Those Who Can Handle a Volume Business. ACT NOW!**

**DON'T WAIT! Wire or Write TODAY!**

**Zerozone**  
*Lifetime Refrigeration*



**ZEROZONE MODEL L25**

## Combines All The Latest Features of High Priced Refrigerators

**Ready for Instant Installation**  
Just Plug It In!

**Temperature Regulator**  
On Cooling Coil Within Easy Reach

**Steel Cabinet**  
Porcelain Inside—Enameled Exterior  
**4½ Cu. Ft. Food Storage Capacity**

**9 Sq. Ft. Shelf Area**  
Plenty Room for Average Family

**ZEROZONE Standard Insulation**

**Chromium Plated Hardware**

**Broom High Legs**      **2 Ice Cube Trays**

**QUIET - - ECONOMICAL**  
**POWERFUL - BEAUTIFUL**

**Quick Delivery Guaranteed**

**ZEROZONE CORPORATION - 927 East 95<sup>th</sup> Street CHICAGO**



## G. E. Sales Promotion Managers Ready for Active Year



Cleveland, Ohio—Detailed plans for sales promotion, in all of its varied phases, were discussed at the spring Sales Promotion Conference of the electric refrigeration department, General Electric Company, held here April 23 to 25.

With addresses by T. K. Quinn, general manager; P. B. Zimmerman, general sales manager; Walter J. Daily, sales promotion manager, and others, the conference program covered all aspects of the refrigeration department's activities for the year.

Magazine and newspaper advertising, radio, billboards, direct mail and other major items on the sales promotion program held a prominent place on the program. The conference was the most enthusiastic and the largest ever held by the sales promotion division.

Among those attending from other cities were:

(First row—left to right)—R. A. Sholl, J. M. Milhon, R. W. Evans, H. E. Warren, H. Ratcliffe, Eva Weatherly, De Ette Frederickson, I. M. Lackey, Ann McCarthy, E. Nolan, W. J. Daily, J. S. Duncombe, P. B. Zimmerman.

(Second row)—P. H. Dow, A. A. Uhalt, M. F. Mahony, R. F. Judd, D. T. Denman, H. Bruhn, J. L. Pause, E. H. Norling, H. L. Parsons, A. H. Johnson, H. Droegkamp, E. H. Langdon, W. M. Hutchison, J. T. Dickson, Glen Wasson.

(Third row)—E. M. Diehl, M. Burnell, G. R. Titus, H. M. Cook, W. A. Toker, J. M. Breckenridge, H. N. Trumbull, A. Willard Ahrens, L. Aurbach, P. H. Ervin.

(Fourth row)—J. F. McBride, S. C. Thornton, W. E. Oettinger, E. F. Fyler, M. A. Campbell, G. C. Davidson.

### ELECTROLUX APPOINTS DISTRIBUTOR

Spencer, W. Va.—The Simmons Auto Company has been appointed distributors for the Electrolux refrigerator for Kanawha, Roane, Jackson, Calhoun, Gilmer and Braxton counties. This department will be conducted under the name of The Gas Refrigeration Company. Sales and showrooms have already been opened at 407 Broad Street, Charleston, with Clyde L. Burdette in charge, and at the Simmons Auto Company building in Spencer, with Ora Stuck in charge.

### NASHVILLE MUSIC HOUSE ENTERS FIELD

Nashville, Tenn.—The Nashville and middle Tennessee distributorship of Kelvinator products has been taken over by the Claude P. Street Piano Co. George B. Gray, long identified with Kelvinator, severed his connection with 555, Inc., at Little Rock, Ark., to assume the management of the Kelvinator division of the new distributing organization at Nashville. Roy Warden is president, and Claude P. Street, vice-president of the Claude P. Street Piano Co.

S. D. Camper, district manager of the Kelvinator Corporation, spent some time at Nashville assisting in the details.

## NEW PRESSURE WATER COOLER PUT ON MARKET

Cleveland, Ohio—The electric refrigeration department of the General Electric Company has just announced a new pressure water cooler designed for lowering the cost of current consumed and reducing water bills.

The cooler utilizes the chilled waste overflow to hasten the cooling of the fresh water, and thus it cuts the cost of current. Before the chilled waste water is drained off, it is made to flow back around the outside of the intake pipes, the waste overflow lowering the temperature of the incoming water, reducing the load on the cooling unit, and increasing the cooler's cold water capacity which results in operating economy.

"As in other products of the electric refrigeration department of the General Electric Company, the mechanism is extremely simple and hermetically sealed," says W. E. Landmesser, manager of the commercial division. "The cabinet is designed for utmost cleanliness, inside and out; it is up on legs and thus provides



New G. E. Water Cooler

plenty of broom-room for cleaning underneath the cabinet. It stands only 41 inches above the floor and the base is less than 21 inches square, occupying less than four square feet of floor area. Water consumption is cut to a minimum because every drop that flows from the tap is properly cooled and drinkable.

The new cooler requires only a simple connection to the water pipes and can be located wherever convenience and utility demand. There has been a great demand from stores, offices, factories and public buildings for the product, which is of all-steel construction, with the entire cooling chamber of spotless white porcelain.

### WERLEY'S NOW SELLING KELVINATORS

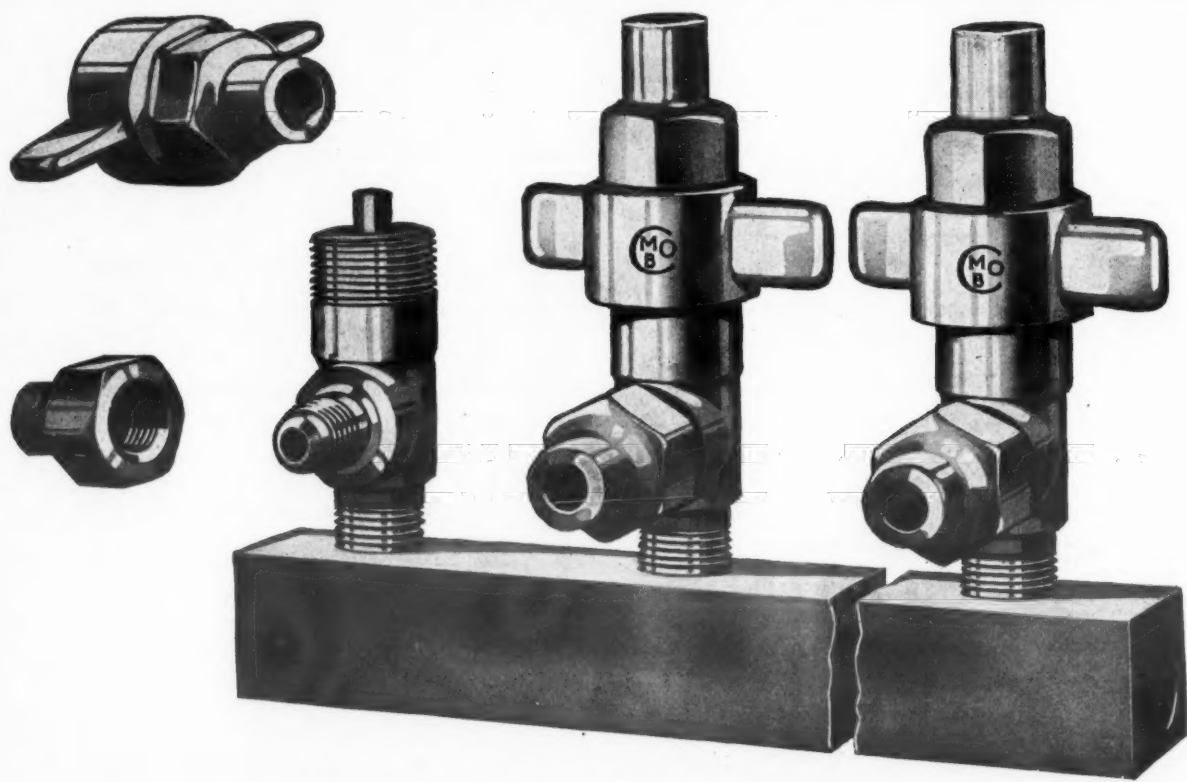
Allentown, Pa.—The Werley Music House, known here as Werley's, has taken the distribution of Kelvinator at Allentown.

Clayton O. F. Werley is the president; George A. Pelling, general manager; Earl Dierkes, until recently employed at Kelvinator headquarters in Detroit, is retail sales manager, and John G. Eddy, veteran Kelvinator man, is in charge of the commercial department.

## THERE IS NO POSSIBILITY OF REFRIGERANT SEEPAGE

*in your Multiple Installations when you use*

## THE MUELLER MANIFOLD



Mueller Manifold for Multiple Installations

This manifold is furnished with 1-4 in., 3-8 in. or 1-2 in. angle valves which are securely sweated to the header. The header is of a special alloy, seamless drawn, square brass tubing. It is designed particularly to withstand high pressure.

Mounting clips are furnished with each set.

Flared tube nuts are assembled on each outlet at the time of manufacture to protect the accurately machined seats and to insure perfect contact for the tubing.

Valves are equipped with combination wing seal cap and wrench for convenience of operation and safety when not in use.

WE MANUFACTURE A COMPLETE LINE OF VALVES AND FITTINGS AND CAN SUPPLY YOUR EVERY REQUIREMENT

Mueller Valves and Fittings are approved by the Underwriters' Laboratories of Chicago.

### Mueller Brass Co.

PORT HURON, MICHIGAN

THREE GENERATIONS OF BRASS MAKING

## CALCO Sulfur Dioxide

"Buy the best, by every test"

Cylinders - Drums - Tank Cars

THE CALCO CHEMICAL CO., INC.

Bound Brook, N. J.

New York

Boston

Philadelphia



# Agreement Near on Proposed National Standard Safety Code for Refrigeration

**THE American Standard Safety Code for Mechanical Refrigeration** in the form in which it will be submitted to the American Standards Association is printed in full herewith. The Code as printed here embodies the list of minor changes in wording now being voted on by the Council of the American Society of Refrigerating Engineers.

Prepared under A. S. A.  
Procedure Governing Sectional Committees  
April 4, 1930

**SCOPE:** This code applies to the safe installation, operation, and inspection of every refrigerating system hereinafter installed employing a fluid, which is expanded, vaporized, liquefied and/or compressed in its refrigerating cycle.

**PURPOSE:** This code is intended to provide reasonable safety for life, limb, health and property.

## CONTENTS

Section 1100—Definitions.  
Section 1200—Classification of Refrigerating Systems.  
Section 1300—Industrial and Commercial Systems.  
Section 1400—Unit Systems.  
Section 1500—Apartment Dwelling Systems.  
Each Section is complete in itself except where reference is made to other sections.

## DEFINITIONS

1100: "AIR CONDITIONING SYSTEM": A refrigerating system for the purification and/or control of temperature and/or humidity of air.

1101: "APARTMENT DWELLING SYSTEM": A refrigerating system employing the "Direct Method" (Par. 1109) in which the refrigerant is delivered by a pressure imposing element to two or more evaporators in separate refrigerators or refrigerated spaces located in rooms of separate tenants in multiple residence buildings.

1102: "APPROVED": Official approval by the authority having jurisdiction.

1103: "BRINE": Any liquid cooled by the refrigerating system and used for the transmission of heat.

1104: "BRINE COOLER": An evaporator for cooling brine in an indirect system (Par. 1116).

1105: "CHECK VALVE": A valve allowing refrigerant flow in one direction only.

1106: "COMMERCIAL SYSTEM": A refrigerating and/or air conditioning system except unit systems (Par. 1137) used in a commercial and/or a business place, such as a meat market, store, florist shop, hotel, office buildings, restaurant, candy shop, bakery, and other commercial enterprises, assembled and installed in the manufacturing and/or business portion of any building.

1107: "CONDENSER": A vessel or arrangement of pipe or tubing in which the vaporized refrigerant is liquefied by the removal of heat.

1108: "CONTAINER": A cylinder for the transportation of refrigerant constructed to conform to the regulations of the Interstate Commerce Commission.

1109: "DIRECT METHOD OF REFRIGERATION": A system in which the evaporator is located in the material or space refrigerated or in air circulating passages communicating with such space.

1110: "EMERGENCY RELIEF VALVE": A manually-operated valve for the discharge of refrigerant in case of fire or other emergency.

1111: "EVAPORATOR": That part of the system in which a refrigerant is expanded or vaporized to produce refrigeration.

1112: "EXPANSION COIL": An evaporator constructed of pipe or tubing.

1113: "FLAMMABLE REFRIGERANT": Any refrigerant which will burn when mixed with air, such as ethyl chloride, methyl chloride and the hydrocarbons.

1114: "FUSIBLE PLUG": A device having a predetermined temperature, fusible member for the relief of pressure.

1115: "HYDROCARBON REFRIGERANT": One containing only hydrogen and carbon, as ethane, propane, isobutane and butane.

1116: "INDIRECT METHOD OF REFRIGERATION": A system in which a liquid as "brine" or water, cooled by the refrigerant, is circulated to the material or space refrigerated or is used to cool air so circulated.

1117: "INDUSTRIAL SYSTEM": A system used in the manufacture or processing of materials, such as in ice-making plants, cold storage warehouses, ice cream plants, dairy plants, packing houses, chemical plants and other industrial enterprises.

1118: "IRRITANT REFRIGERANT": Any refrigerant which has an irritating effect on the eyes, nose, throat, or lungs, as ammonia and sulphur dioxide.

1119: "LIQUID RECEIVER": A vessel permanently connected to the high pressure side of a system for the storage of refrigerant.

1120: "MACHINERY ROOM": A separate room for the housing of any pres-

sure imposing element, condenser, receiver, or shell type apparatus.

1121: "MIXER": A vessel or device for mixing the refrigerant with another substance.

1122: "MULTIPLE SYSTEM": See Apartment Dwelling System.

1123: "PRESSURE IMPOSING ELEMENT": Every device or portion of the equipment used for the purpose of increasing the pressure upon the refrigerant.

1124: "PRESSURE LIMITING DEVICE": A pressure or temperature-responsive mechanism for automatically stopping the operation of the pressure imposing element at a predetermined pressure.

1125: "PRESSURE RELIEF DEVICE": A pressure relief valve, a rupture member, a fusible plug or other approved device for relieving pressure.

1126: "PRESSURE RELIEF VALVE": A valve held closed by a spring or other means, which automatically relieves pressure in excess of its setting.

1127: "PRESSURE VESSEL": Any refrigerant containing receptacle of a refrigerating system other than expansion coils, headers and pipe connections.

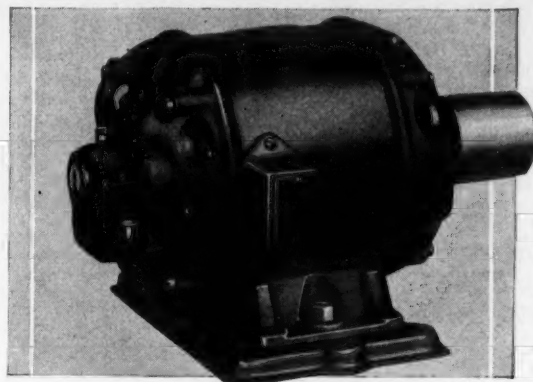
1128: "PUBLIC BUILDINGS, BUSINESS BUILDINGS, RESIDENCE BUILDINGS, APARTMENTS": Buildings as defined by (insert here section and name of state or municipal regulations).

1129: "REFRIGERANT": A substance used to produce refrigeration by its expansion or vaporization.

1130: "REFRIGERATING SYSTEM": A combination of parts in which a refrigerant is circulated for the purpose of extracting heat.

(Continued on Page 12, Column 1)

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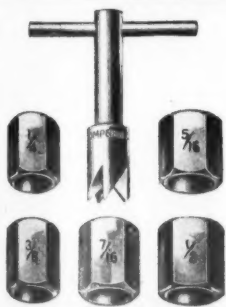
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## STANDARD SAFETY CODE

(Continued from Page 11, Column 3)

1131: "RUPTURE MEMBER": A device which will automatically rupture at a predetermined pressure.

1132: "SEALED UNIT": One which operates without stuffing-box and/or which does not depend upon contact between moving and stationary surfaces for refrigerant retention.

1133: "SERVICE VALVE": A key-op-

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erated shut-off valve in Class C, D and E systems used only during shipment, installation, or repair.

1134: "SHELL TYPE APPARATUS": A refrigerant containing pressure vessels having tubes for the passage of a cooling or a refrigerating fluid.

1135: "SLEEPING ROOM": (a) Any room built, used or equipped for sleeping purposes:

(b) Any room, combination of interconnecting rooms, alcoves, or niches not separately ventilated to the outside used for living purposes, including sleeping and having a total volume of four thousand (4000) cubic feet or less. By interconnecting rooms is meant adjoining rooms within the jurisdiction of a single tenant which can be closed off by doors.

1136: "STOP VALVE": A shut-off valve other than a service valve for controlling the flow of refrigerant.

1137: "UNIT SYSTEM": A class D or E system which can be removed from the users' premises, either with the refrigerated cabinet, or separately, without disconnecting any refrigerant containing parts.

### CLASSIFICATION OF REFRIGERATING SYSTEMS

1200: Refrigerating systems shall be classified according to the total weight of refrigerant contained in or required for their proper operation.

1201: A Class "A" system is one containing one thousand pounds (1000 lbs.) or more of refrigerant.

1202: A Class "B" system is one containing more than one hundred pounds (100 lbs.) but less than one thousand pounds (1000 lbs.) of refrigerant.

1203: A Class "C" system is one containing more than twenty pounds (20 lbs.) but not more than one hundred pounds (100 lbs.) of refrigerant.

1204: A Class "D" system is one containing more than six pounds (6 lbs.) but not more than twenty pounds (20 lbs.) of refrigerant.

1205: A Class "E" system is one containing six pounds (6 lbs.) or less of refrigerant.

## Servel is Conspicuous at Paris Salon



Jules Mareschal, Servel distributor in France, arranged this attractive exhibit at domestic science exposition.

### SECTION 1300 INDUSTRIAL AND COMMERCIAL SYSTEMS

"Industrial System" (Par. 1117): A system used in the manufacture or processing of materials, such as in ice-making plants, cold storage warehouses, ice cream plants, dairy plants, packing houses, chemical plants and other industrial enterprises.

"Commercial System" (Par. 1106): A refrigerating and/or air conditioning system used in a commercial and/or business place, such as a meat market, store, florist shop, hotel, office building, restaurant, candy shop, bakery and other commercial enterprises, except unit systems, assembled and installed in the manufacturing and/or business portion of any building.

### LIMITATIONS OF INDUSTRIAL SYSTEMS

1310: Industrial systems using the direct method of refrigeration may be located without restriction in separate buildings or separate sections of buildings, provided:

- The pressure imposing element, condenser, receiver, and shell type apparatus of Class "A" systems are placed in a machinery room.
- That if a flammable refrigerant is used the entire building for a class "A" system and the machinery room for a class "B" system is made of non-combustible material.
- Machinery rooms of Class "A" systems using an irritant or flammable refrigerant have two exits.
- The number of workmen employed above the first story does not exceed one for each two hundred square feet (200 sq. ft.) of floor area of the upper floors.

1311: Commercial systems using the direct method of refrigeration are limited in locations as follows:

- Any system may be installed in the basement, first story, top story or on roof.
- If a non-irritant and non-flammable refrigerant is used, systems installed between the first and top story may contain one thousand

pounds (1000 lbs.) or less of refrigerant.

- If an irritant or flammable refrigerant is used and the building contains a sleeping room, systems installed between the first and top story may contain one hundred pounds (100 lbs.) or less of refrigerant. If there is no sleeping room, such systems may contain two hundred pounds (200 lbs.) or less of refrigerant.

(d) If an irritant or flammable refrigerant is used, the entire system must be confined to the space occupied by a single tenant if the building containing such system is over three (3) stories in height or if it contains a sleeping room.

1312: A machinery room must be provided for the pressure imposing element, condenser, receivers, and shell type apparatus of commercial systems using an irritant or flammable refrigerant as follows:

- For basement, first story and top story systems containing over five hundred pounds (500 lbs.) of refrigerant.
- For systems between the first and top stories of business buildings containing over one hundred pounds (100 lbs.) of refrigerant.
- For systems between the first and top stories of a combination business and residence building containing over fifty pounds (50 lbs.) of refrigerant.

1313: All refrigeration in the following locations, except that provided by unit systems (Par. 1132 and 1137) as permitted in Sec. 1400 and as permitted in Par. 1314 must be supplied by the Indirect Method of Refrigeration (Par. 1116), with the entire refrigerant containing apparatus placed in a machinery room (Par. 1120). If a flammable or irritant refrigerant is used, the machinery room shall have no connection with other parts of the building, shall be entered and ventilated from the outside only, and shall be constructed of fire-resisting material:

- Theatres and similar places of public assembly;
- Exhibition and assembly halls above the first floor;

(c) Buildings containing wards and private rooms of hospitals;

- Asylum dormitories;
- Schools, except laboratories used for teaching refrigeration;
- Main entrances and exits of:
  - Public buildings
  - Business buildings
  - Factory buildings

(g) All places where unit systems are prohibited in Par. 1402;

(h) Any room not separated from locations a, b, c, d and e by an unpierced fire resisting wall. In the above locations liquid cooled by an irritant or flammable refrigerant shall not be used in a spray system to cool the air, although this is one form of an indirect system.

1314: Evaporators of systems using a non-flammable and non-irritant refrigerant may be installed in the air ducts of air cooling and air conditioning systems, provided:

- Non-corroding materials are used or permanent protection against corrosion, such as galvanizing, is provided.
- The evaporators are tested at least one and one-half the minimum pressures specified in 1370.
- The total refrigerant content of systems containing over five hundred pounds (500 lbs.) of refrigerant shall not exceed one pound (1 lb.) for one hundred fifty cubic feet (150 cu. ft.) of volume in the space to which the air is conducted.

### Design

1320: Design and Construction.  
1321: Every part of a refrigerating system, except pressure gauges and control mechanism, shall be designed, constructed, and assembled to withstand safely and without injury the required minimum test pressures specified in Sec. 1370. The design and construction of pressure vessels shall conform to the rules of authority having jurisdiction.

### Safety Devices

1330: Safety devices—Construction-Location-Size and Discharge.

(Continued on Opposite Page)

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- Stem is of non-corrosive hard bronze rod.
- Metal to metal back seat is made when valve is in full open position.
- Hexagon head on stem fitted into hollow hexagon chamber in valve body—eliminates torsional strain on bellows or soldered joints.
- Holes in mounting flange accessible for attachment to knockout box.

### TYPE 415

- Forged Brass Handwheel formed for convenient grip.
- Rotatable bushing securely threaded and locked with screw.
- Generous amount of solder used in wells of correct design—non corrosive flux employed in soldering.
- Valve only 3 1/4" high when full open.
- Maximum size 1/2" SAE male flare.
- Full unobstructed openings—equal to inside diameter of copper tubing.

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## STANDARD SAFETY CODE

(Continued from Opposite Page)

1331: All safety devices shall be constructed of materials suitable for the refrigerant used, and unless otherwise specified, shall be set to prevent the pressure exceeding the test pressure.

1332: Pressure limiting devices are required as follows:

(a) On every class A, B and C system, operating above atmospheric pressure, to stop the action of the pressure imposing element at a pressure less than 90% of the setting of the pressure relief device located on the high pressure side of the system.

(b) On water-cooled Class C and D systems using a water cooled condenser so constructed that the pressure imposing element is capable of producing a pressure in excess of the test pressure.

1333: Pressure relief valves are required as follows:

(a) In Class A and B systems on the high pressure side between the main stop valve and the pressure imposing element, to relieve excessive pressure into the low pressure side of the system or to the atmosphere.

(b) In Class A, B and C systems on shell type apparatus, such as liquid receivers, condensers, evaporators, liquid separators, and absorbers which can be shut off by stop valves.

(c) On the low pressure side of the systems into which the relief valves on the high pressure side are discharged. This relief valve should be vented to the atmosphere as provided in Par. 1339.

1334: Hand operated valves are required in Class A and B systems to discharge the refrigerant from the high pressure side in case of fire. Such valve shall be located outside the machinery room or shall be operable from the outside.

1335: Rupture members may be substituted for the relief valves in carbon dioxide systems or systems operating below atmospheric pressure.

1336: Class C and D and E systems, unless so constructed that they will not burst due to the expansion of the refrigerant when subjected to abnormal outside temperature such as that generated in a fire, are to be protected by a pressure relief device.

1337: No stop valve shall be located between a pressure relief device or pressure limiting device and the part of the system protected thereby, unless two devices of required size are used and so arranged that only one can be shut off for repair purposes at any one time.

1338: Liquid level gauge glasses, except those of the bull's eye type, shall have automatic closing shut-off valves, and such glasses shall be adequately protected against injury, by slotted metal casings.

1339: Refrigerant shall be discharged from the relief valve as follows:

(a) Where an irritant or flammable refrigerant is used, the discharge, if to the atmosphere, must be conducted to the outside not less than twelve (12) feet above the grade, and not closer than ten (10) feet to any opening in any building, or closer than twenty (20) feet to any fire escape. The discharging pipe shall be not less than the size of the relief valve outlet. The discharge from more than one relief valve may be run into a common header, the area of which shall be equal to the areas of the pipes connected thereto, and the outlet of which shall be turned downward.

(b) Where ammonia is used in a Class B or C system, the discharge may be into a tank of water which shall be used for no purpose except ammonia absorption. At least one gallon of fresh water shall be provided for every pound of ammonia in the system. The water used shall be provided from freezing without the use of salt or chemicals. The tank shall be substantially constructed of not less than one-eighth ( $\frac{1}{8}$ ) inch or No. 11 U. S. gauge iron. No horizontal dimension of the tank shall be greater than one-half ( $\frac{1}{2}$ ) the height. The tank shall have a hinged cover or, if of the enclosed type, shall have a vent hole at the top. All pipe connections shall be through the top of the tank only. The discharge pipe from the pressure relief valves shall discharge the ammonia in the center of the tank near the bottom.

1340: The size of the relief valves as required, shall be as follows:

Pounds of Refrigerant in System	Carbon Dioxide		Other Refrigerants	
	Num-ber	Size	Num-ber	Size
Up to 1,000 lbs.	1	$\frac{3}{4}$ "	1	$\frac{3}{4}$ "
1,200 to 1,800 "	1	$\frac{3}{4}$ "	1	$\frac{3}{4}$ "
1,800 to 3,000 "	1	$\frac{3}{4}$ "	1	1"
3,000 to 5,000 "	1	$\frac{3}{4}$ "	1	1 $\frac{1}{4}$ "
5,000 to 7,500 "	1	$\frac{3}{4}$ "	1	1 $\frac{1}{2}$ "
7,500 to 13,500 "	1	1"	1	2"
13,500 to 27,000 "	—	—	2	2"

1341: Where rupture members are permitted and used, the equivalent area of the relief valve specified must be provided.

1342: Fusible plugs shall have a maximum fusing point of 280° F. The free opening shall be one-sixteenth inch ( $\frac{1}{16}$ " in diameter for one hundred pounds (100 lbs.) or less of refrigerant.

1350: Open Flame and Electrical Equipment.

1351: No fire, flame, or arc light will be permitted in Class A, B or C machinery room in which a flammable refrigerant is used.

1352: No major electrical equipment except the motors and switchboards necessary to operate the machinery shall be permitted in a Class A or B machinery room using a flammable refrigerant. All starting equipment, including switches, automatic starters, and the like, shall be of the oil-immersed or enclosed type.

1353: All Class A and B systems using a flammable or irritant refrigerant shall have an emergency switch controlling all of the electrically operated refrigerating machinery or the remote control of such a switch located outside of the machinery room where it can be quickly reached and operated in case of necessity.

1360: Material Installation and Testing.

1361: All refrigerant piping, tubing, fittings and valves shall be of materials suitable for the refrigerant used and shall withstand the pressures as shown in paragraph 1370.

1362: All piping and tubing containing the refrigerant shall be supported by strong, durable and fire resisting material in such a manner as to prevent excessive vibration and strains at joints and connections and all refrigerant containing parts, and refrigerators containing such parts must be so rigidly supported or secured that they cannot be disturbed without the aid of tools or undue force.

1363: No refrigerant line shall be located in any elevator dumbwaiter or other shaft containing moving object or one that has openings to living quarters and/or main exit hallways.

1364: No connection shall be made with the public water supply which will impair the purity thereof. Water used for removing heat from a refrigeration system shall not thereafter be used for drinking purposes.

1365: The minimum strength of connecting pipes or tubing shall be:

(a) Standard weight butt welded pipe may be used for test pressures not exceeding one hundred and fifty pounds (150 lbs.). Extra heavy butt welded pipe must be used for higher test pressures.

(b) Lap welded standard weight pipe or seamless tubing of the same size may be used for test pressures not exceeding three hundred pounds (300 lbs.). Extra heavy pipes must be used for higher test pressures.

1366: All flanged fittings for all Class A and B systems shall be of the recessed gasket type.

1367: Stop or service valves shall be provided as follows:

Stop Valves—Class A and B systems in:

(b) Inlet and outlet pipes of each pressure imposing element.

(b) Inlet and outlet pipes of each liquid receiver.

(c) Each liquid, and suction branch header.

(d) Each inlet and outlet pipe of each evaporator.

Stop or Service Valves—Class C system in:

(a) Each inlet and outlet pipe of each pressure imposing element.

(b) Each outlet of each liquid receiver.

(c) Each inlet and outlet line connected with each evaporator (expansion coils excepted).

(d) Each inlet and outlet pipe of each flooded type evaporator which can be removed as a unit.

1368: Check valves shall be installed in the discharge pipes of each pressure imposing element of Class A and B systems, using an irritant or flammable refrigerant.

## Copper Tubing

1369: Protected seamless copper tubing may be used for lines containing refrigerant in Class C, D and E systems, provided:

(a) The minimum wall thickness shall be .034 inches.

(b) For outside diameters over five-eighths inches ( $\frac{5}{8}$ " the wall thickness shall be increased in the ratio of the new diameter to five-eighths inches ( $\frac{5}{8}$ ").

(c) Refrigerant containing tubes shall be enclosed in iron pipe or tubing. The enclosing conduit may be of flexible metal at bends or terminals if not exceeding six feet (6 ft.) in length, and if supported rigidly.

(d) All valves and fittings, except service valves, and those of the evaporator, pressure imposing element, liquid receiver, or shell type apparatus, and every connection of tubing shall be arranged in or on a suitable metal box, shall be rigidly attached thereto or to the supports thereof. Every such box shall have an accessible door or removable cover.

(e) All stop valves shall be easily accessible and have permanently attached hand-wheels, levers or some other device for easily operating them without other tools.

(f) A valve shall be located in the inlet end of each branch liquid pipe and in the outlet end of each branch suction pipe, and in the liquid and suction lines of each service outlet.

(g) Possible distribution of escaping refrigerant by the conduit system is to be prevented by sealing the space around the refrigerant containing lines at the upper end of each piece of enclosing conduit.

(h) All refrigerant line joints shall be accessible.

(i) No enclosing conduit shall be required for refrigerant lines:

(1) Between the pressure imposing element, condenser, or shell type apparatus and the nearest riser box if such lines are not over six feet in length.

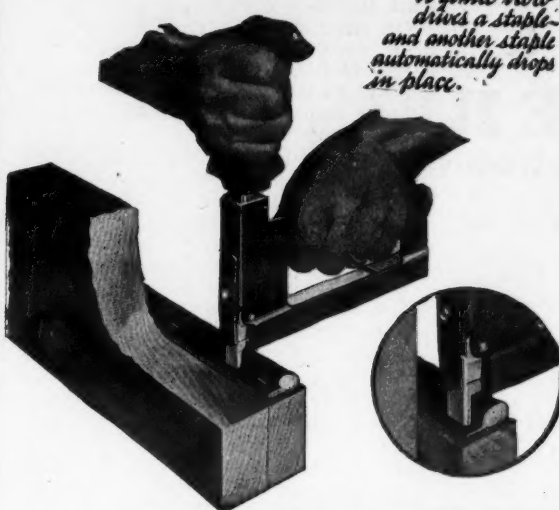
(2) In class "D" and "E" systems confined to the space of a single tenant.

(j) Every opening from or into an enclosing conduit for refrigerant tubes shall be free from sharp edges which might injure the tubing.

1370: After complete installation and before operation, every refrigerant containing part of every system that is assembled and piped in place, except evaporators, pressure imposing elements, re-

(Continued on Page 14, Column 2)

## GASKET QUICKLY APPLIED



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176 "BC" Copper, per pkg. .... 3.75 176 "BM" Monel, per pkg. .... 5.50  
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Prices are F. O. B. New York

R. N. E. MARKWELL MFG. CO. INC.  
200 HUDSON STREET  
NEW YORK, N. Y.

EXTRA DRY ESOTOO  
THE PUREST  
SULPHUR DIOXIDE  
Analysis Guaranteed  
WE HAVE AN AGENT WITH OUR PRODUCT IN STOCK  
NEAR YOU - WRITE US WHERE WE CAN SERVE YOU  
VIRGINIA SMELTING CO. West Norfolk, Va.  
F. A. EUSTIS, Sec. - 131 State St. BOSTON. 2 Rectory St. NEW YORK.

Leland Motors  
Embodying Outstanding Qualities for Electric Refrigeration Adaption  
Day after day, year in and year out, Lelands are demonstrating their superiority thru countless installations in this specialized field where durability, dependability and quietness of operation are first essentials. • Built in the various fractional sizes and for every type of installation.  
The Leland Electric Co.  
Dayton, Ohio, U.S.A.

DRY DRIER DRIEST  
SULPHUR DIOXIDE  
for Direct Charging  
"Ansul" Sulphur Dioxide is scientifically dried through a four stage dehydrating system, each stage being composed of three units in series. Absolute manufacturing control is maintained throughout.  
Also in drums and tank cars  
2 3 4 10 25 70 100 120 150  
Every Cylinder Analyzed Pure Bone Dry  
ANSUL CHEMICAL CO.  
MARINETTE, WISCONSIN

## Trio of Easterners Pays Visit to Kelvinator Factory



THESE "Three Musketeers" of apartment house sales were recent business callers at the Kelvinator factory in Detroit.

At the left is Mr. Dolan, sales manager of the apartment house division at

Boston. Center is Mr. Fagan, sales manager of the apartment house division at Philadelphia, and at the right, Mr. Hughes, manager of the apartment house division of the New York branch. All three seem pleased with their 1930 sales.

## FLINTLOCK CONDENSERS

Full Capacity



With Every Unit

FIN AND TUBE SAME SOLID PIECE OF MATERIAL

## FLINTLOCK CORPORATION

4461 W. Jefferson Ave.  
DETROIT, MICH.



**FREEZEL**HOUSEHOLD REFRIGERATING  
SYSTEMS  
INSTALLED IN THE NEW**SEEGER**  
Porcelain CabinetsSolve the Problem of the  
**WHOLESALE  
DISTRIBUTOR**

IN SECURING:

1. Dependable quality
2. Competitive prices
3. Profitable margins

**Freezel Systems**are Time-Tested - Quiet - Simple  
Dependable - Low in First Cost  
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LIST PRICES AS LOW AS

**\$139<sup>00</sup>**

AT THE FACTORY

**The FREEZEL Corp.**

481 Main St.

GARDNER, MASS.

**For Automatic  
Refrigeration  
Manufacturers**

Whatever you require in copper, brass, bronze, or copper alloys, we are prepared to furnish on contract either parts or sub-assemblies ready for installation in your unit. Boilers, compression nuts, filters, float-balls, condensers, special nipples, bellows and thermostats, and a large variety of other standard parts. Let us quote on your requirements.

**BRIDGEPORT  
BRASS CO.**General Offices and Plant  
Bridgeport, Conn.

Offices in Principal Cities

**"Bridgeport"**  
TRADE MARK**MODERNISTIC SHOWROOM  
OPENED BY FRIGIDAIRE**

HOLLYWOOD, home of screen luminaries, attended a different kind of opening April 5. This time, however, it was not the premiere showing of a million-dollar movie. Rather it was the christening of the modernistic new display room of the Frigidaire Sales Corporation.

At this opening, screen stars took the background while the hydrator-equipped Frigidaire played the starring role. The formal program started at 8:30 o'clock in the morning and came to a close at 10 o'clock in the evening. A tremendous attendance of enthusiastic visitors was chalked up during the day, and ten sales were closed on the floor, according to Ivan L. de Jongh, branch manager.

The guests were served with salads made from greens that had been crisped and freshened in the hydrator, and with ice cream made with the aid of the cold control. Souvenirs were distributed in the form of recipe books suggesting new and interesting variations in the summer menu.

The new building reflects the silver, gray and white of Frigidaire. The exterior is a graceful expression of the modern period, finished in gray stone of three tones, expansive planes of plate glass and white metal grill-work. The grays and silvers are repeated in the interior, where they are set off by warm shades of buff, green and yellow. The floor, of jade green, is marked off in diamond patterns, while the walls are divided into three graduated bands of rosy buff, tapering off to a plate tone near the ceiling.

Triangular patterns of yellow and buff border the ceiling. Frosty pris-

matic lights are suspended up and down the room from pewter fixtures in terraced circular designs. Chromium-finished furniture emphasizes the silvery

quality of electric refrigeration and blends with the hardware of the various household, apartment and commercial models on display.

**Hollywood Attends New Type of Premiere**

Frigidaire's new showroom in the capital of filmdom.

**"First Nighters" at Frigidaire Opening**

Large crowds inspected the models in the new Frigidaire display room in Hollywood.

**New Binders now ready  
for keeping your copies of  
Electric Refrigeration News**

In providing new binders for readers who like to keep back issues of the news in accessible form several improvements have been made.

The new binder is of larger capacity than the old because of the increased thickness of the paper. Twenty-seven metal retaining strips are furnished, since 27 issues will be published in 1930. The metal strip is inserted easily and quickly at the middle of each issue and does not "pinch" the paper at the binding edge. Every page lies flat and all type matter is easily readable.

On the new binder the name "Electric Refrigeration News" is neatly stamped in gold on the back binding edge as well as on the top cover. The binder has stiff covers of good quality black imitation leather.

You'll find the binders mighty good-looking and very convenient. A flip of the finger brings a back issue before you when you want to look up an article—an illustration—some information. Buy a binder!

Shipped postpaid upon receipt of \$3.75.

**Electric Refrigeration News**

550 Maccabees Bldg., Detroit

**STANDARD SAFETY CODE**

(Continued from Page 13, Column 3)  
ceivers and condensers that are factory tested, shall be tested and proved tight under the following minimum pressures:

TESTS		Minimum Test Pressure in Pounds Per Square Inch	
		High Pressure Side	Low Pressure Side
Refrigerant Used	Symbol		
Carbon Dioxide	CC <sub>2</sub>	1500	750
Ethane	C <sub>2</sub> H <sub>6</sub>	1100	550
Ammonia	NH <sub>3</sub>	300	125
Propane	C <sub>3</sub> H <sub>8</sub>	250	125
Methyl Chloride	CH <sub>3</sub> Cl	175	125
Sulphur Dioxide	SO <sub>2</sub>	135	100
Isobutane	C <sub>4</sub> H <sub>10</sub>	135	100
Butane	C <sub>4</sub> H <sub>10</sub>	100	50
Ethyl Chloride	C <sub>2</sub> H <sub>5</sub> Cl	100	50
Dichloromethane	C <sub>2</sub> H <sub>4</sub> Cl <sub>2</sub>	15	15
Dichloroethylene	C <sub>2</sub> H <sub>3</sub> Cl <sub>2</sub>	15	15
Trichloroethylene	C <sub>2</sub> HCl <sub>3</sub>	15	15

1371: For other refrigerants the authority having jurisdiction shall determine the rules of installation and test pressures.

1372: The installer of every Class A, B and C system shall notify the authority having inspection jurisdiction not less than twelve hours previously, the day and hour on which the final tests are to be applied. Tests of installations in new buildings shall be made before the piping and connections of the system are covered or made inaccessible.

1373: A dated declaration of such test, signed by the manufacturer or installer, shall be posted in the machinery room within ten feet of the pressure imposing element. If an inspector is present at the tests, he shall also sign the declaration.

1374: Manufacturers supplying compressors, condensers, receivers, evaporators or other pressure vessels of refrigerating systems for sale to others for assembly purpose where such complete systems are not sold under the manufacturer's name or trademark shall test these parts to at least the pressures specified herein and shall stamp the test pressure, the name of the refrigerant for which they are built, and their name on each major part.

1380: Operating precautions.

1381: It shall be the duty of the person in charge of the premises wherein any refrigerating system is located to exercise due diligence to see that the refrigerating system is properly maintained and operated at all times.

1382: A gas helmet or mask suited to the refrigerant used shall be provided with every Class A and B system that operates above atmospheric pressure, carbon dioxide systems excepted.

1383: Every gas helmet or mask shall be of a type approved by the Bureau of Mines as suitable for the refrigerant used, shall be inspected annually and shall be kept in operative condition in an easily accessible case or cabinet.

1384: All flammable or irritant refrigerant withdrawn from any system shall be discharged into a suitable absorbent or container.

1385: Containers shall not be connected to the system except during charging or withdrawing periods.

1386: In testing with air pressure the pressure imposing discharge shall not exceed the temperature of one hundred and fifty degrees Fahrenheit (150° F.).

1387: Every owner of every Class A, B and C system shall conspicuously post as near as practicable to the pressure imposing element of such system a card giving amount of refrigerant charge, operating directions and precautions to

be observed in case of a break-down or leak, including the following:

- (1) Instructions for shutting down system in case of emergency.
- (2) The name, address and telephone number of every engineer and operator in charge.
- (3) The name, address and day and night telephone numbers for service.
- (4) The location of the nearest fire alarm box.
- (5) The name, address and telephone number of the physician or hospital to be called in case of emergency.

1388: Every system shall have the name of the refrigerant used printed on or affixed in a permanent manner thereto as follows:

- (1) Class A and B systems:
  - (a) The pressure imposing element or piping adjacent thereto.
  - (b) The liquid receiver.
  - (c) Refrigerant lines.
  - (d) Every shell type apparatus and evaporator not in a refrigerated space.
  - (e) On the door or adjacent thereto of every refrigerated space, cabinet or box containing an evaporator except in industrial systems (Par. 1117).
- (2) Class C systems:
  - (a) The pressure imposing element condenser, receiver or anyone of these when assembled as a unit.
  - (b) Refrigerant lines.
  - (c) On each evaporator.
- (3) Class D and E systems:
  - (a) On each evaporator.

**Section 1400****UNIT SYSTEMS**

A unit system is one which can be removed either with or separately from the space refrigerated without disconnecting any refrigerant containing parts.

1401: Unit systems shall have Classes "D" and "E" only.

1402: Limitations as to use:

- (a) No system shall be placed in wards, or private rooms of hospitals, sleeping quarters of asylums, cell blocks of prisons, or any place where people are confined or helpless.
- (b) Unit systems containing not over three and one-half pounds of refrigerant, and sealed units containing not over six pounds of refrigerant tested to twice the pressure specified herein can be located anywhere except as provided in Par. 1402 (a).
- (c) Only the systems specified in paragraph (b) will be permitted in sleeping rooms (Par. 1125).
- (d) Only Class "E" systems shall be placed in:
  - (1) Entrances and exits of public buildings.
  - (2) Lobbies and auditoriums of places of public assembly.
  - (3) Dance and assembly halls above the first floor.
  - (4) Exits and entrances of buildings not classed as public buildings, having less than two thousand cu. ft. of volume per pound of refrigerant used.
  - (5) Underground waiting-rooms.
  - (6) Subways.
  - (7) Diet kitchens of hospitals. Such kitchens shall have tight-fitting, self-closing doors, and ventilation to the outside air by means of an easily opened window.

**Construction**

1403: A system unless so constructed that it will not burst due to the expansion of the refrigerant when subjected to an abnormal outside temperature, such as that generated by a fire, shall be protected by a pressure relief device as—

- (a) Safety valves, if used, shall be one-quarter inch (1/4").
- (b) Rupture members, if used, shall

(Concluded on Opposite Page)



## STANDARD SAFETY CODE

(Concluded from Opposite Page)

- have at least a one-sixteenth inch (1/16") diameter opening.
- (c) Fusible plugs, if used, shall have a maximum fusing point of two hundred and eight degrees Fahrenheit (280° F.) and a free opening of one sixteenth of an inch (1/16") diameter.

1404: All systems shall conform to the provisions of paragraphs 1354, 1361, 1362 and 1370.

1405: Makers shall mark plainly thereon the following information:

- (a) Maker's name.  
(b) Kind of refrigerant used.  
(c) Amount of refrigerant used to the nearest pound.  
(d) The test pressure or pressures applied.

## Section 1500

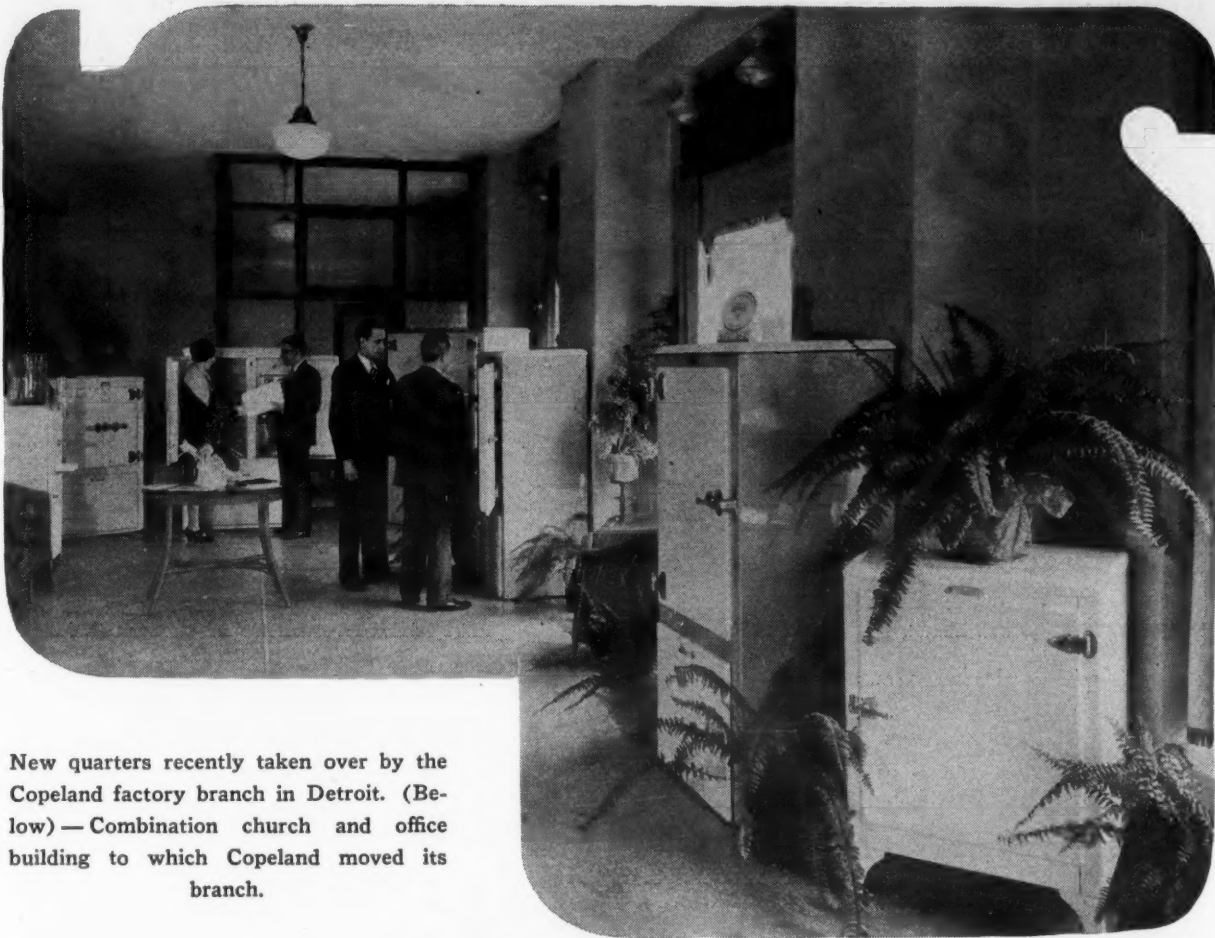
## APARTMENT DWELLING SYSTEMS

An apartment dwelling system is a refrigerating system employing the "direct method" (Par. 1109) in which the refrigerant is delivered by a pressure imposing element to two or more evaporators in separate refrigerators or refrigerated spaces located in rooms of separate tenants in multiple residence buildings.

1501: All apartment dwelling systems shall also comply with the following paragraphs:

- (a) 1321—Construction for strength.  
(b) 1331—Setting of safety devices.  
(c) 1332—Pressure limiting device.  
(d) 1336—Pressure relief valves.  
(e) 1337—Stop valves.  
(f) 1338—Liquid gauges.  
(g) 1361—Suitable materials.  
(h) 1362—Piping supports.  
(i) 1363—Location of refrigerant lines.  
(j) 1365—Strength of pipe.  
(k) 1367—Location of stop or service valves.  
(l) 1370—Tests.

## Copeland-Detroit Branch Expands Facilities



New quarters recently taken over by the Copeland factory branch in Detroit. (Below)—Combination church and office building to which Copeland moved its branch.

## GRAHAM BUILDING UP AN ACTIVE ORGANIZATION

Detroit, Mich.—The factory branch of Copeland Products, Inc., is now housed in new quarters. On May 1 the company moved from its old offices in Convention Hall building to the combination church and business block at West Grand Boulevard and Twelfth Street, one of the most heavily traversed intersections of Detroit.

Removal to more strategic quarters is part of the merchandising program introduced January 1, by Manager R. H. Graham, that is proving to be one of the most outstanding in the country. It has resulted in doubling the sales outlets in Michigan, the factory branch's territory; in expansion of the branch's personnel; in sales in Detroit in the first quarter that exceed those in the like period of a year ago by 200% in some divisions and by 1,000% in others.

Copeland's Detroit branch was established last fall on belief of factory officials this area was important enough to justify this development, and because of the factory's removal to its new plant in Mt. Clemens, Graham, a veteran of the electric refrigeration industry, with 14 years' experience as salesman, distribution manager and regional and factory branch manager, was placed in charge in December.

Since then Graham has perfected a complete branch organization, with an office manager, city dealer supervisor, provincial dealer supervisor, educational director, commercial supervisor, apartment house supervisor, and household supervisor; established 22 associate dealerships in the Detroit area, and 26 dealer-distributorships as the nucleus of a Michigan-wide organization.

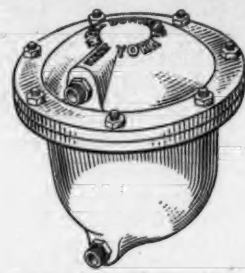
"There seems to be a definite trend toward Copeland. Domestic sales are numerous through our own office and our

associate dealers. Apartment installations are almost on a like basis. We have recently signed up 14 contractors for the year. A surprisingly large number of these have contracted for 50 units and more. Our apartment house installations are leaping far beyond what has been the rule in years past. Our water cooler business is assuming large proportions. In the past 30 days we have signed contracts for Copeland-Spear circulating ice water systems in four new Detroit telephone exchanges, and one new exchange each in Port Huron, Holland and Grand Haven, Mich., and in one of Detroit's leading hotels. Our dealer-distributors in the larger Michigan centers report similar expansions in their business."

(Below)—The personnel of the Detroit Copeland factory branch. Seated—left to right—M. W. Rudd, educational director; Manager Graham; C. A. Straub, commercial supervisor. (Standing)—A. F. Schwemmer, office manager; J. G. Sutherland, provincial dealer supervisor; W. W. Knight, city dealer supervisor.



## Buhring Water Purifiers for Electric Coolers



Easily connected to all types  
Requires minimum attention

## GUARANTEED

to remove taste, color and odor.

Will operate under any water pressure.

For Information Write

**BUHRING**  
WATER PURIFYING CO.

40 Murray St., New York City

Representatives  
Allen-Buhring Water Purifying Service,  
Chicago, Ill.  
Boston Filter Co., Boston, Mass.

The  
**Filtrine**  
Filter

assures  
pure, clear  
water  
from your

**ELECTRIC**

Water Cooler

WRITE FOR DETAILS

**FILTRINE**

MANUFACTURING COMPANY  
49 LEXINGTON AVE., Brooklyn, N.Y.  
Manufacturers of FILTERS & COOLERS of all sizes.

precision  
built

SPECIALIZING IN  
REFRIGERATION COMPRESSOR  
and ECCENTRIC

**Crank Shafts**

MADE TO YOUR SPECIFICATIONS. SEND US YOUR  
BLUE PRINT — WE WILL SEND YOU OUR PRICES.

**MODERN MACHINE WORKS, INC.**

195 MILWAUKEE STREET, MILWAUKEE, WISCONSIN

**Mouthpiece  
Canister  
Respirators**  
for  
**PROTECTION  
against  
Sulphur Dioxide  
Fumes**

No. 53 PULMOSAN Canister  
Mouthpiece Respirators, with  
flexible tubing, and positive  
flutter valve, give positive protection  
against SO<sub>2</sub> fumes.

Air-tight goggles can be supplied.

Mail The  
COUPON

**PULMOSAN SAFETY  
EQUIPMENT CORP.**

176 Johnson St.

Brooklyn, N. Y.

**PULMOSAN SAFETY EQUIPMENT CORP.**  
176 Johnson St., Brooklyn, N. Y.  
Gentlemen: Send us full information on your No. 53  
Mouthpiece Canister Respirator.  
Name \_\_\_\_\_ Address \_\_\_\_\_  
(E. R. N.)



## LITERATURE OF MANUFACTURERS

Catalogues, bulletins and other material recently issued.

Manufacturers are requested to send copies of new trade literature to Electric Refrigeration News.

### Allen-Bradley

A recent bulletin describes the Allen-Bradley Bulletin 830, automatic pressure switch and accessories, used in connection with automatic motor control for compressors, pumps and other equipment not exceeding 150 pounds' pressure per square inch.

### IcElect

Heavy duty refrigerating units designed for commercial installation are described in a folder now being sent out by the IcElect Corporation, Omaha, Nebr. Four compressor models of the V belt drive and powered with motors from 1/3 to 1 1/2 hp. are mentioned. The IcElect dry system for soda fountains and ice cream cabinets using the new cylindrical evaporators is covered in detail.

### Inspection Bureau

The Material and Equipment Inspection Bureau, Chicago, Ill., has been recently organized for rendering service in the field of inspection, purchasing and liquidation. A folder outlines the purpose and service of the bureau.

### Norge

The Norge Corporation, Detroit, Mich., division of the Borg-Warner Corporation, in its new apartment house folder describes Norge refrigeration for that purpose. Features of the new Norge refrigerators are covered and five photographs show apartments where Norge units have been installed. The "Sentinel," "Defender" and "Guardian" models are illustrated.

### Seeger

Two catalogs, Nos. 49 and 50, recently issued by the Seeger Refrigerator Co., St. Paul, Minn., cover the wide range of models in the 1930 Seeger domestic and commercial lines. Catalog No. 49 is devoted to the commercial models, thirty-two of which are illustrated therein.

Seeger's domestic cabinets are covered in No. 50. New innovations, such as the water tank and the chiller for keeping vegetables are fully described along with the vegetable bin and illumination of the cabinet interiors. Five models in the De Luxe have the features mentioned above. These cabinets are of all-porcelain construction. In the moderate price group, Seeger has six cabinets of all-porcelain construction. To round out its line Seeger has six lacquer cabinets.

### Sparklets

Installation of "Sparklets—the Miniature Home Soda Fountain" in mechanical refrigerators is the subject of a small leaflet issued by Sparklets, Inc., New York, N. Y. The Sparklet suspension ring, which is easily affixed to the refrigerator shelving, provides a permanent place for the syphon. Information as to how to get the best results from the Sparklet syphon is also incorporated in the leaflet.

### Waters

A small folder has been sent in by the Waters Filter & Cooler Co., New York City, describing the Waters' system of filters. Four models of filters with capacities from 25 to 125 gallons per day make up the Waters' line. These filters can be hooked up in series for purifying water for drinking purposes or cooling systems.

## SUBSCRIPTION ORDER

ELECTRIC REFRIGERATION NEWS  
550 MACCABEES BUILDING, DETROIT, MICH.

Please enter subscription to *Electric Refrigeration News*.

United States and Possessions: ☐ \$2.00 per year. ☐ Three years for \$5.00

All other countries: ☐ \$2.25 per year. ☐ Two years for \$4.00

I am enclosing payment in the form of ☐ Check ☐ P. O. Order ☐ Cash

Name .....

Address .....

City and State .....

Remarks: .....

## A Distinguished Trio



THE inimitable Charlotte Greenwood and Bryant Washburn helped to start the General Electric "Drowned in Water" campaign in Milwaukee. They were present in the E. H. Schaefer showrooms when the water-laden unit was placed on display, and posed with the machine when the photographers arrived.

They assured Mr. Schaefer that they both know what it means to work under difficulties, although thus far in their stage careers neither of them has been called on to work under water. They have left that part of the show to the trained seals.

### STREET CAR CARRIES SIGNS IN SALES CAMPAIGN

Charlotte, N. C.—The Southern Public Utilities Co. conducted a sales campaign which ended very successfully on May 3. Contributory to the success of the drive was the advertising originality of that company's assistant manager, Charles B. Miller, and James A. Forney, manager of the Charlotte branch. They commandeered one of the city street cars and placarded it boldly. The signs attached to each side of the car were 7 feet high and 23 feet long. A sign on the rear of the car read, "Hot Weather Coming—We Have Had a Cold Spring Here."

The car traveled through the city and all the suburbs. C. D. Mitchell, Kelvinator district manager, reports that it brought many prospects to the display room and helped make numerous sales.

### TO DISTRIBUTE ELECTROKOLD IN VANCOUVER

Vancouver, B. C.—Murray Brothers, Limited, 714 Richards Street, have just been appointed Electro-Kold distributors for the province of British Columbia.

This firm is specializing in Electro-Kold and oil burner equipment, and are just moving into their new sales room at the above address. They were formerly located at 137 Powell Street, having been in a general plumbing and contracting business in Vancouver for over twenty years.

### MILLER ON LAIDLEY STAFF

Spokane, Wash.—O. D. Miller, for the past 12 years connected with General Electric, has been named as general manager here for the Laidley Company, distributors for General Electric refrigeration in the Inland Empire.

### SEVEN NEW DEALERS WITH KELVINATOR-CAMBRIDGE

Cambridge, Mass.—Kelvinator Sales Corp. has appointed seven new dealers in the state of Massachusetts. Dealers taking on representation of Kelvinator are Ayer Electric Light Co., Ayer, R. A. LaCentra & Co. and Boston Furniture Mart, both of Boston, James L. Kane, Groton, Matthew F. Toohey, Hudson, Mystic Radio Company, Malden and Edward R. Hall, Inc., Quincy.

### BLACK JOINS ELECTROLUX IN SEATTLE

Seattle, Wash.—Percy Black, who has had several years' experience in the automatic refrigeration field, and was recently with the refrigeration division of the Portland Gas & Coke Co., Portland, Ore., has been appointed manager of the new refrigeration division of the Seattle Gas Company, which was formerly known as the Seattle Lighting Company. Four carloads of Electrolux gas refrigerators recently arrived at Seattle to fill orders of housewives in this city, according to the new manager.

### GORGES GETS NEW POST IN BALTIMORE

Baltimore, Md.—James H. Gorges has been appointed manager of the electric refrigeration department of the United Auto Sales Co., North Avenue and Oak Street. He will be in charge of sales for the Frigidaire, which is being carried exclusively by this automobile concern.

Before joining the United Auto Sales Co., Mr. Gorges was associated with the Consolidated Gas Electric Light & Power Co. of this city, where, for several years, he was identified with the refrigeration department.

### ELECTRIC SHOP SELLING COPELANDS

Dallas, Tex.—England's Electric Shop, 2712 Live Oak Street, has been appointed dealer for Copeland electric refrigeration, according to J. M. England, president.

The new dealership has been established in this city for a number of years, merchandising various lines of electric appliances, and moved into a new building erected at a cost of \$65,000 last September.

### PATENTS

Searches, reports, opinions by a Specialist in REFRIGERATION  
H. R. VAN DEVENTER  
Solicitor of Patents - Refrigeration Engineer  
342 MADISON AVE. NEW YORK

### REFRIGERATION RUBBER WARE

Specializing in the development and manufacture of hard and soft rubber parts for electric refrigeration.

THE AETNA RUBBER CO.  
ASHTABULA, OHIO

## THE CONDENSER

ADVERTISING RATE fifty cents per line (this column only).

SPECIAL RATE if paid in advance—Positions Wanted—fifty words or less, one insertion \$2.00, additional words four cents each. Three insertions \$5.00, additional words ten cents each. All other classifications—fifty words or less, one insertion \$3.00, additional words six cents each. Three insertions \$8.00, additional words sixteen cents each.

### MISCELLANEOUS

CORPORATION having secured patent allowance on revolutionary features in domestic and commercial electric refrigerating machines is desirous of securing individuals and sales organizations for state and district distributors. Machines are noiseless, sturdy, fool proof, fully enclosed, and operate with low amount of current for capacity. They will sell at the price you have been wishing for. Write, stating what territory you prefer and how much. Replies treated confidential. Box 251.

WANTED—Will pay cash for your entire inventory, regardless of size, of obsolete model units, low sides or tanks, or cabinets. Please submit your inventory and lowest cash price you will accept for entire quantity. No deal too large or too small for us. Will guarantee not to conflict with your sales and distributors' organization in selling your inventory. Can assure you any information will be treated strictly confidential. Write, wire or 'phone. American Liquidating Corp., 307 N. Michigan Ave., Chicago, Illinois.



### REFRIGERATOR LINE FITTINGS

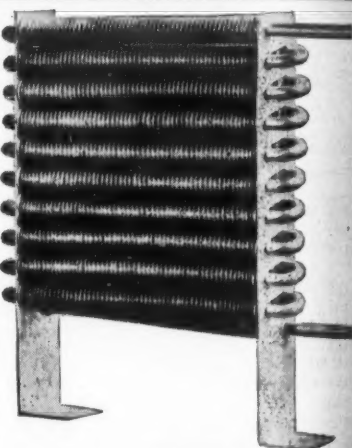
"UNITED" Copper Tube

dehydrated-deoxidized

Quick Service For New England

A. E. BORDEN CO.

110 High St., Boston, Mass.



### Specify

### ROME CONDENSERS

Made of heavy gauge de-oxidized seamless copper tube. One piece construction.

Designs for all requirements.

Rome-Turney Radiator Co.  
ROME, N. Y.

## Electrical Refrigeration Efficiency

is assured with



### Wirfs PATENTED "AIRTITE" GASKET

Improves the efficiency of door contacts on wood or metal boxes and decreases operating costs—a valuable economy talking point for salesmen.

WIRFS CORPORATION

135 S. 17th St. St. Louis, Mo.



# Refrigerated Food Section ELECTRIC REFRIGERATION NEWS

Registered U. S. Patent Office.

The business newspaper of the refrigeration industry

VOL. 4, No. 18, SERIAL No. 94

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Business News Pub. Co.

DETROIT, MICHIGAN, MAY 7, 1930

Entered as second class matter  
Aug. 1, 1927, at Detroit, Mich.

IN TWO PARTS, PART 2

## CHERRIES

Frozen by Northern New York  
Packers Are Prized  
By Pie Bakers

MORE than a score of fruit packers in the State of New York have been freezing cherries and a few other fruits for several years. The product is not quick-frozen, and there is some question among the packers as to whether or not quick freezing, or at least freezing at a lower temperature than that now used, would produce a better product.

One of the centers of the cherry freezing industry is at Sodus, near Lake Ontario, where the Sodus Cold Storage Co. has been freezing large quantities of fruit, the amount frozen being limited only by the size of the crop. Last year was a good cherry year and 8,000 barrels, each containing 450 pounds of cherries, were frozen. In other years the amount has dropped as low as 4,000 barrels.

The cherries, which are of the sour variety, and which come from a territory extending as far south as Geneva, at the north end of Seneca Lake, are frozen in the containers, either barrels or 30 pound cans, at a temperature of 15 degrees F. The barrels are rolled during the freezing process, in order to distribute the syrup and insure an even freeze. Before they reach the freezing plant they are pitted and sugar is added. The usual proportion is one part of sugar to four parts of cherries, although at times one part of sugar is mixed with three parts of cherries, a proportion that some of the packers prefer.

The freezing process takes from two to three days, and after it is completed the cherries are kept in the warehouse at a temperature of from 12 to 15 degrees F. A charge of \$1.25 per barrel is made for the freezing and for the first month's storage, and after that a charge of 35 cents per barrel is made for each month the cherries remain in storage.

The demand for the product comes chiefly from pie bakers, confectioners and others, who require good, firm cherries, and shipments are made from Sodus to New York, Philadelphia, Detroit and other cities.

The price obtained is about 10 cents per pound, which does not leave a great margin of profit. On a barrel selling for \$40.50, the profit is well under a dollar. On the other hand, it has proved alighty cheaper to preserve cherries in this way than to can them, and the frozen cherries hold their flavor just as well, and in the opinion of many, even better than the canned fruit.

Some trouble has been experienced at Sodus in maintaining the proper color in the top layers of the frozen cherries. Almost invariably the top layer of the can or barrel lacks the bright red color desired by the purchaser, and so affects the desirability of the whole barrel, as the discolored cherries are seen first when the barrel is opened. Various means have been tried to eliminate this condition, but thus far without success. It does not affect the bulk of the cherries, however, and purchasers are coming to realize that fact.

(Concluded on Page 12, Column 2)

## TRUCKING

MECHANICAL refrigeration powered off the propeller shaft of a Mack truck recently kept a quarter of beef in good condition after a long trip in California. Directly aft of the driver's cab, a methyl chloride compressor is affixed to the frame of the truck. Pipes from the unit encircle the entire truck body, which is heavily insulated with Dry-Zero.

Stops were made about every fifteen miles in the journey to enable the driver and observer to check the temperature in the refrigerated body. Although with outside temperatures ranging from 94 to 102 degrees it was found that at no time was the temperature in the van above the 40 degree mark.

Robert D. Hatch is the designer of this new truck model and has adapted it so that it can be changed over in the winter months for the transportation of perishables. A patented device will enable hot water to be drawn from the radiator and circulated through the pipes, thus keeping the contents warm with the system that cools in warm months.

## VALUED PRAISE

IN the field of engineering advertising no man is better known than W. L. Rickard. He has this to say of the NEWS:

"I have finished looking over ELECTRIC REFRIGERATION NEWS for April 23rd, including its yellow journal supplement, and I am much impressed with the real job that you are doing. There is so much of interest in the pages of the NEWS that I cannot imagine any official in any branch of the electric refrigeration business believing that he can keep pace with the industry unless he reads it."

## SOUTHERN SALES

THE next issue of the Refrigerated Food Section will contain news of the progress of quick-frozen foods in the South. Many of those identified with the new industry feel that the South will prove an excellent market for the new products and some producers already are assiduously cultivating the Southern market.

The progress they are making will be reported in the yellow section of the May 21st issue.

## FUTURE PLANS

New York, N. Y.—So well satisfied is the General Foods Corporation with the results of the Springfield test campaign that arrangements are being made to put Birdseye Frosted Foods on sale in another New England city. Because of negotiations that have not yet been completed, the General Foods Corporation is not ready to announce the scene of the new campaign.

Marion Harper, vice-president, has announced, however, that the number of outlets selling the Birdseye products will be much larger than in Springfield.

## PROLONGED

Springfield Campaign Will Be  
Continued for Another  
Month

Springfield, Mass.—The General Foods Corporation, which originally announced that the sales test of Frosted Foods in this city would last sixty days, has decided to prolong the campaign under present conditions for another month. The success of the work thus far, which has exceeded even the most favorable anticipations, was the chief factor in the decision to continue. As announced in the Refrigerated Food section of April 23, a number of additional cuts of meat will be added in the next few days.

Among the additions will be chickens and ducks, and if the chickens had only been on hand three weeks earlier, the happiness of the General Foods officials would be even greater than it is. In this section of the country chicken and ham are the staple dishes on the Easter Sunday menu. Just why that is, nobody seems quite sure, but the fact remains nevertheless, and when Easter came the Frosted Foods went unbought while chickens and hams were in demand. The result was a bad bend in the sales curve for the Easter week-end, that might have been avoided if the chicken and ham custom had made itself known to the General Foods people far enough in advance.

Otherwise everything has been going along in splendid shape. Sales are keeping up, the successive week-end specials are continuing to be popular, and the percentage of repeat customers keeps right on climbing. This repeat business is one of the most satisfactory features of the entire campaign. It shows that the people of Springfield are not simply trying the new products as a novelty, and then going back to their original buying habits. They like the frozen meats and vegetables, and come back for more.

A visible evidence of repeat business may be witnessed any Saturday in a number of the stores, where big piles of cartons containing roasts may be seen beside the refrigerated cases. These are roasts ordered earlier in the week for delivery on Saturday. Under ideal conditions, or rather under the conditions that will exist in the average store when quick-frozen foods have become better known, there will be ample low temperature storage space for all quick-frozen products on hand, but here in Springfield at this time the demand for the larger cuts has outrun the capacity of the storage space available. Keeping the meat for a few hours in this way does not harm it, as it comes from the warehouse cold enough to keep in perfect condition for several hours without defrosting.

The demand for the larger cuts of meat is another favorable factor in the situation. As pointed out in an article which appeared in ELECTRIC REFRIGERATION NEWS at the outset of the campaign early in March, the tendency at that time was to buy the smaller and more inexpensive packages, quite evidently with a view to sampling the new foods at the least possible expense. That tendency seems to be a thing of the past, and the big piles of Sunday roasts bear testimony to the change.

Incidentally this drift toward the larger cuts has increased the amount of the average sale to a comfortable degree, and at the same time has cut down sales expense. It is just as easy for a salesman to hand a five-pound roast across the counter as it is to dig out a little box of raspberries. And the cashier has to work about as hard to change a one dollar bill as she does to change a five.

(Continued on Page 4, Column 3)

## STIMULATION

Kansas City, Mo.—Three distributors of electric refrigerators here, in order to stimulate interest in better food preservation, are sponsoring an essay writing contest. Refrigerators valued at \$1,700 are to be given as prizes.

The essays are limited to 500 words on the subject "Why I Should Have Modern Refrigeration in My Home." For the two first, two second and two third best essays there will be given three General Electric refrigerators and three Kelvinators which range in price from \$375 down to \$210.

The sponsors of the contest are the Kansas City Power & Light Company, the Western Kelvinator Company and the Glueck Company.

## The Seal of Approval



This Springfield citizen knows that Birdseye raspberries are good

## CUDAHY

Joins Ranks of Meat Freezers

Omaha, Neb.—The Cudahy Packing Company, which is celebrating its fortieth anniversary this year, has joined the ranks of the packers who are producing quick-frozen meats. Details are not available at this time in regard to the quantities of chilled cuts being produced or where they are being sold, but Cudahy officials see in the new process an opportunity to stimulate the demand for cuts that have not been as popular in the past as their quality merits, as well as a chance to effect considerable savings in the shipping of bones and waste.

P. L. Robertson, of the Omaha plant, is in charge of the department which is turning out the quick-frozen products. His views on the subject of packaged frozen meats are naturally of great interest. He says:

"There are a number of advantages to the consumer and packer in placing these chilled meats on the market prepared in this manner; elimination of waste is one, as the packed product is entirely edible, cut in individual portions and packed in a neat, sanitary, transparent wrapper. It is a tremendous movement toward convenience both for the housewife and dealer, guaranteeing cleanliness and the opportunity to estab-

lish quality guaranty under trade mark brand.

"Frozen meats in the past have not been entirely satisfactory, due to not being frozen at a low enough temperature, but under the new plan of freezing at lower temperatures, the meats retain their flavor and original color, and

(Concluded on Page 12, Column 3)

## EXPERIMENTAL

Liverpool, England—M. T. Zarotschenzeff, inventor of the "Z" rapid freezing and chilling process for meats, fish and fruits, etc., has been doing some experimental work for the Liverpool Refrigeration Co., Ltd., at a demonstration plant at Warrington, England.

Quick freezing experiments have been made on cod, codling, hake, turbot, filleted hake, plaice, soles, whiting, filleted plaice, filleted cod, lamb cutlets, pork chops, sausage, cod roe, cod roe in cartons, kidneys, pork, shrimps, tomatoes. These experiments were made in both air and in atomized brine and the operation of the "Z" method using atomized brine only lasted from twenty to thirty minutes.

The taste, quality and appearance of the products frozen in the atomized brine were good, and the steaks, meat cuts and fish fillets that were first packed in cellophane paper and then frozen by the "Z" process were of special tenderness.

## BRITISH

See Swift's Frozen Products

London, England.—Early in April, Smithfield Market had its second chance to look over quick-frozen meats from the United States. As mentioned in the April 9 issue of the Refrigerated Food section of ELECTRIC REFRIGERATION NEWS, a small shipment was sent over some time ago by A. H. Benjamin, of New York, but it was seen and examined only by a select group of his friends.

The second shipment was sent over by Swift & Company and was put on public view at Stand No. 72 of the London Central Markets. The samples shown included pork loin roasts, chops, sliced beef livers, oxtails, lamb rib chops, legs of lamb, porterhouse steaks, rib roasts and veal cutlets.

The attractive appearance of the packaged meats was the subject of much comment from the British merchants who had an opportunity to see them, and those who were invited to eat samples of the quick-frozen products had nothing but praise for them.

The development of quick freezing in the United States is being followed with keen interest by producers and distributors of foodstuffs on this side of the Atlantic, and the possibilities of the new process is a frequent topic of discussion.



**E.T.L. Service** for Domestic and Commercial  
Electric Refrigeration  
Testing and experimental laboratory service for Manufacturer, Distributor, Central Station—  
Test data exclusive property of client.  
**ELECTRICAL TESTING LABORATORIES**  
80th Street and East End Avenue, NEW YORK CITY, N. Y.



## Prestige

You are building prestige in your community with a good type of electric refrigerator. You can increase this prestige by selling the SUPER Automatic Oil Heater also, and installing it by the exclusive SUPER Ceramic method. Write for the booklet, "Silence".

**THE SUPER OIL HEATOR CO.**  
PAWTUCKET, RHODE ISLAND

## THE CHIEF ANSWERS THE JUNIOR SALESMAN



**HOW MANY REASONS  
ARE THERE FOR  
ENDORISING CORKBOARD?**

There are plenty of reasons,  
my boy,  
but they all come back to 3 things:  
Corkboard insulation helps a cabinet  
freeze faster,  
hold cold longer,  
and—here's the important point—  
corkboard gives lifetime service.  
Its moisture resistance  
keeps insulating power intact  
for permanent protection.

**Novoid Corkboard Insulation**

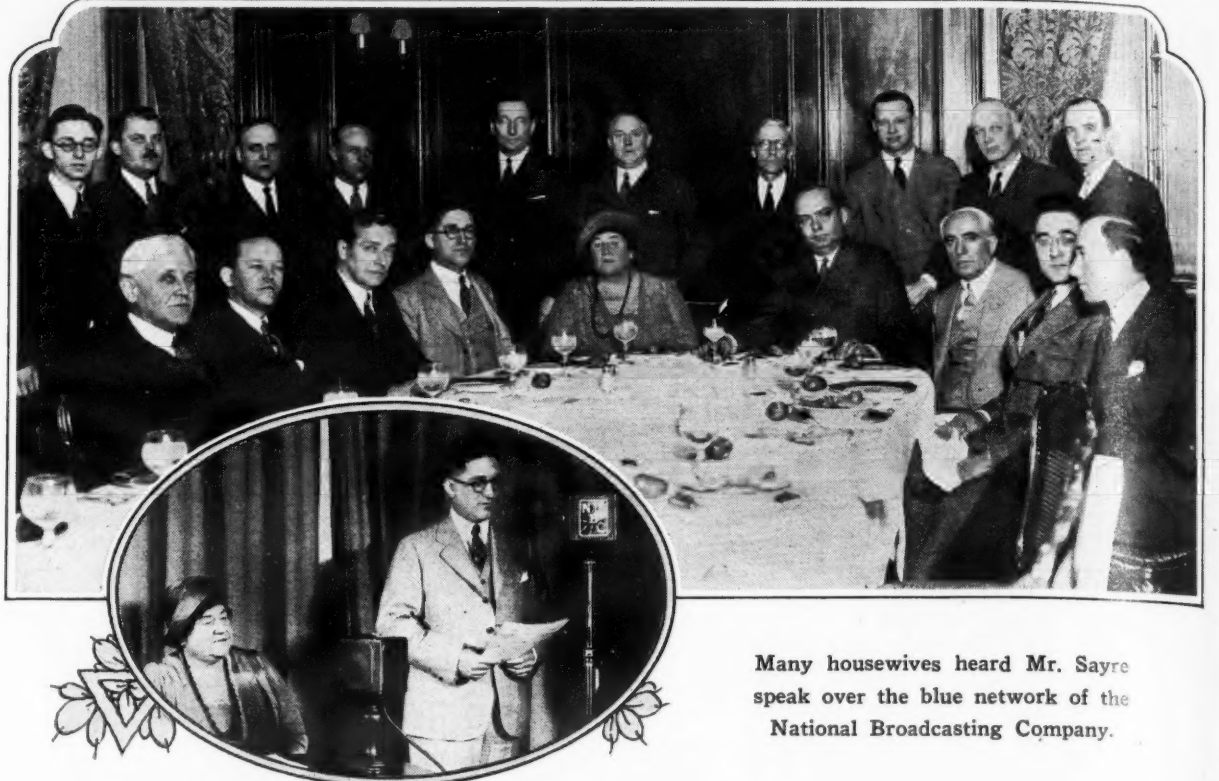
CORK IMPORT CORPORATION



345 W. 40TH ST., NEW YORK

"Permanent Protection for All Refrigeration"

## Selling Sayre Proves No Easy Job



Many housewives heard Mr. Sayre speak over the blue network of the National Broadcasting Company.

**L**UNCHEON in the studio of the National Broadcasting Co., at the conclusion of the Forecast Radio School of Cooking hour, at which J. S. Sayre, Kelvinator sales manager, was guest of honor at this interesting and unusual session.

That distinction on this particular occasion meant that Mr. Sayre had to listen while eight space salesmen, one after the other, tried to prove to him that Kelvinator should advertise in their publication. Luckily for him he didn't have to tell whether they convinced him

or not. Those shown in the photograph are:

Standing, Left to Right—Wade Arnold, N. B. C.; Robert Rankin, W. H. Rankin Co.; Frank Silvernail and E. R. Hitz, N. B. C.; Gilbert T. Hodges, New York Sun; William H. Rankin, William Barrow, New York Herald-Tribune; Thomas H. Walker, New York Telegram; Walter Drey, Forbes; William E. Mac-kee.

Sitting—B. T. Butterworth, New York Times; Harry Brown, New York Evening Post; "Hub" Fairchild, New York

Sun; Mr. Sayre; Mrs. E. M. Goudis; Campbell Wood, Director Utility Sales, Kelvinator Corp.; Dr. C. Houston Goudis, Forecast School of Cooking; Fred Hale, New York Journal; George Flannagan, New York World.

Insert shows Mr. Sayre broadcasting new Kelvinator features over the "blue network" of the National Broadcasting Company at New York, April 17, at 11:00 a. m., on the time of the Forecast Radio School of Cooking conducted by Mrs. Goudis, well known Home Economics lecturer and culinary expert.

## Fresh Meats in Package Form

**F**RESH meats may now be obtained in sealed boxes. After two years of experimenting, Samuel Slotkin, president of the Hygrade Food Products, has perfected a method whereby all sizes, qualities and kinds of fresh meats, chops, steaks, legs of lamb, kidneys and etc., minus bones, fat and other waste, will be sold in packages from refrigerated cases. The meats are freshly cut and are not frozen.

Stoecker & Bender's market on Flatbush Ave., Brooklyn, is now selling the freshly boxed meats. In a short time, Mr. Slotkin expects to have hundreds of similar shops in operation.

The H. C. Bohack stores in Brooklyn also have in operation a system of central meat cutting by which fresh cut

meats are supplied in transparent wrappers, branded and marked with price and weight. At the present time about 20 Bohack stores which formerly did not have meat departments are handling the packaged products. The Bohack chain numbers 539 stores, of which 332 have fresh meat departments, and it is planned to extend the new service to the 187 stores not selling meats.

At the central cutting plant the crew works at night to fill the orders phoned in at the close of the previous business day. The meats make a continuous journey in the cutting room. They pass through the hands of the cutters, inspector, scaler, who weighs and prices them, the marker, and finally to the wrapping room, where they are wrapped in sheets

of transparent moisture-proof paper. Dry-Ice shipping containers are used in the transportation of the goods to the various stores. Trucks making early morning trips carry the refrigerated containers and deposit them outside the door of the places retailing packaged meats. Employees who open the store an hour or two later place the meats in the refrigerated counters.

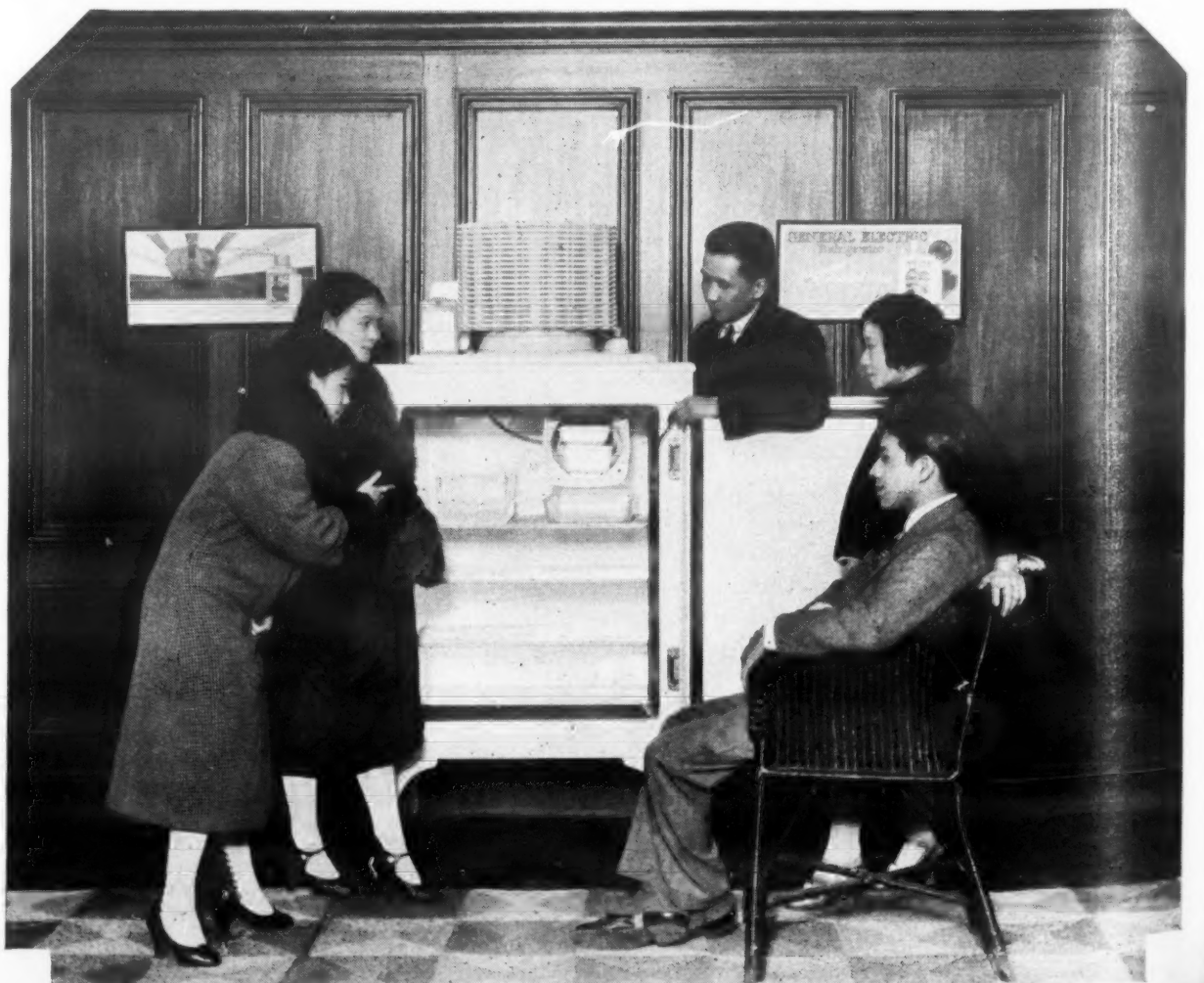
As a matter of precaution all packages are dated and no package is allowed to remain on sale after 48 hours from the time of packaging. Price of the meats which bear the trade name "Bohack's Fresher Cut Meats" are from 5 to 15 cents a pound lower than those of similar fresh meats sold by the old method.

## Oriental Appreciation

**C**HINESE housewives, whether they dress in the styles of the Mandarin period or like their Occidental sisters, are alike attracted to the beauty and convenience of the General Electric re-

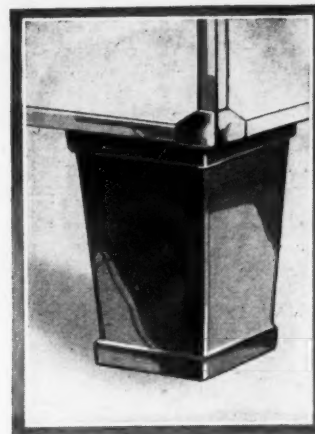
frigerator. To them it is a real delight. In the Shanghai showrooms of Anderson, Meyer & Co., there is on display a complete line of General Electrics. To the display rooms come housewives in

flapping sandals and high-heeled slippers. Spacious windows, which afford an excellent view of the interior of the store, with its gleaming refrigerators, attract attention of the passersby.





# Merchandizing



The Six Inch High Black Porcelain Legs under the Cabinets add to life and appearance.

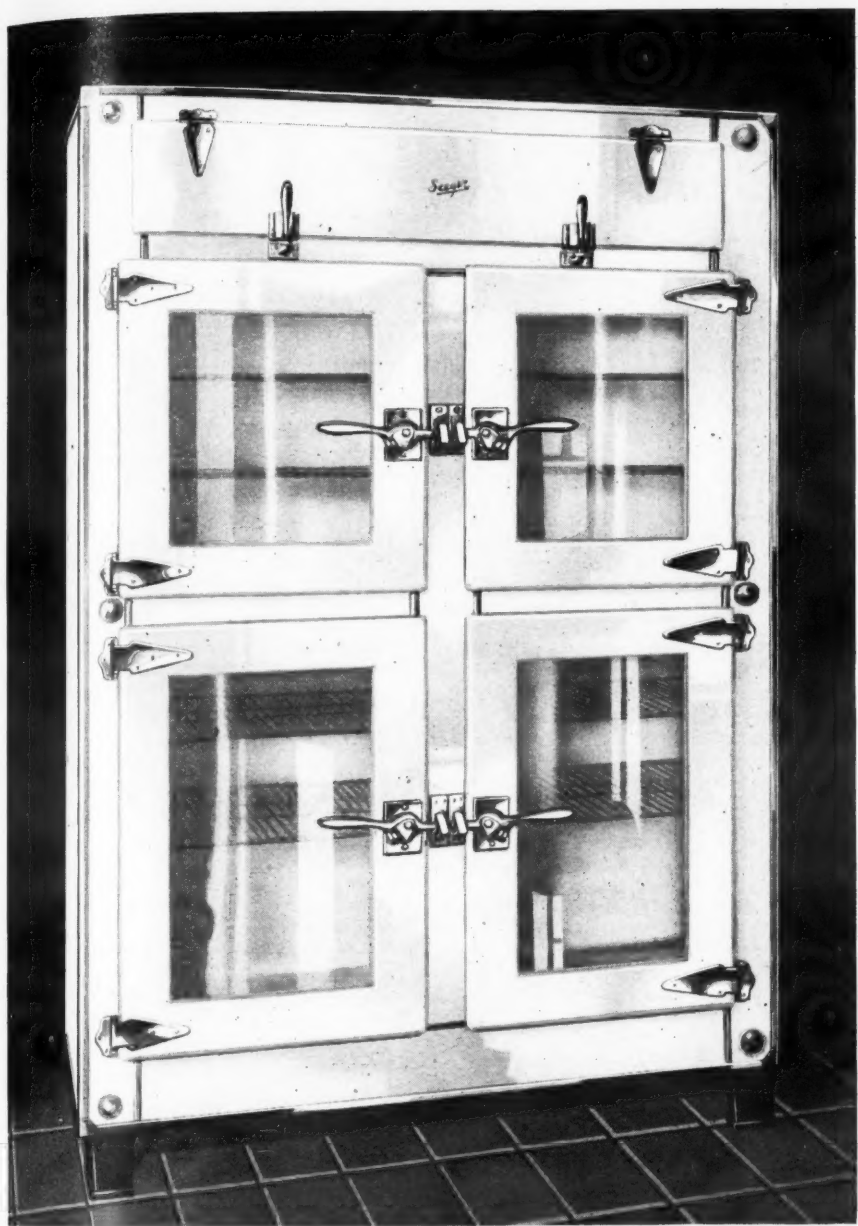
# features

IN COMMERCIAL CABINETS

BY

# Seeger

SAINT PAUL



Any Commercial Cabinet by Seeger can be equipped with either glass or mirror doors at slight additional expense.

**C**OMMERCIAL CABINETS by Seeger are extremely attractive on account of their many exclusive merchandizing features ---a few of which we show on this page.

The experience of 25 years building exceptionally high grade refrigeration Cabinets is built into each Cabinet---Seeger Laboratories and Experimental departments have labored successfully to produce a Commercial Cabinet worthy of the name plate "Cabinet by Seeger."

Commercial Cabinets by Seeger are sturdily built, and adequately insulated to maintain needed low temperature, at lower operating cost for years.

## SEEGER REFRIGERATOR COMPANY

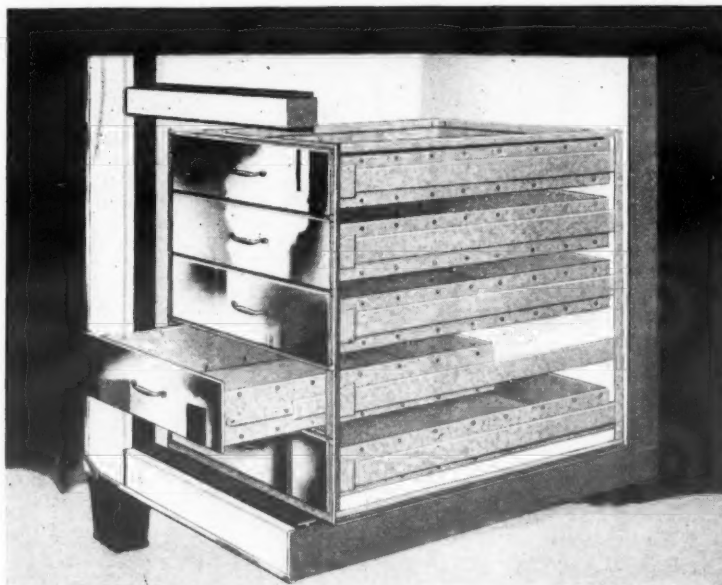
SAINT PAUL, MINNESOTA

389 Madison Ave.,  
New York, N. Y.

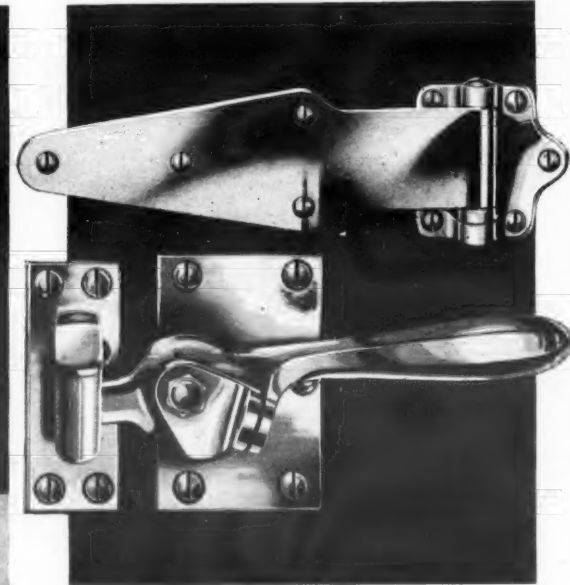
655-657 So. La Brea Ave.,  
Los Angeles, Calif.

26-28 Providence St.,  
Boston, Mass.

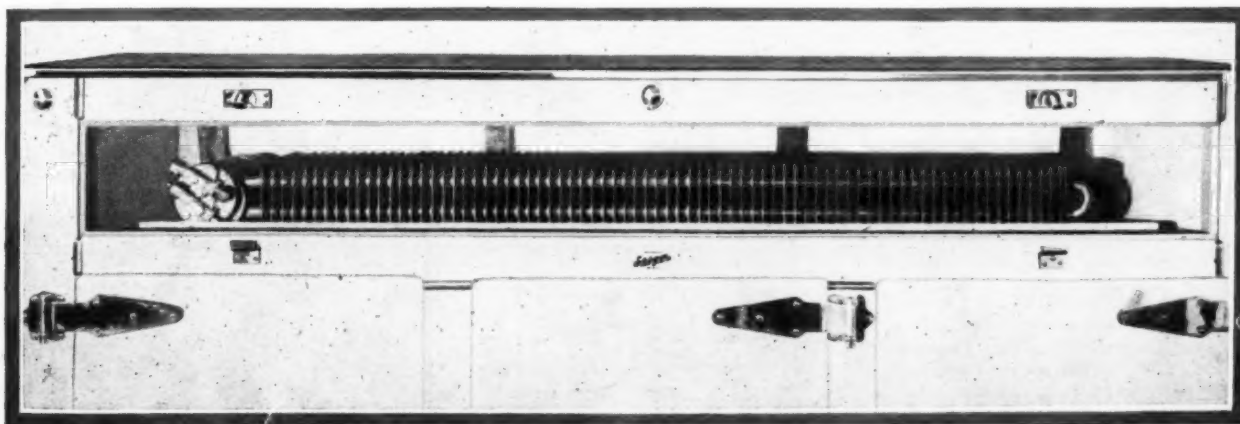
228 No. La Salle St.  
Chicago, Ill.



Nests of Short Order Drawers made to fit any Commercial Cabinet by Seeger---they fasten on to the lower shelf hooks, and do not interfere with the doors.



Heavy Chromium plated hardware on Commercial Cabinets by Seeger is durable, and will retain its lustre for many years---holds doors firmly in place.



The overhead Coil or Tube compartment in Cabinets by Seeger for Electrical or Machine Refrigeration, originated by Seeger, conserves floor and food space, and allows free movement of cold air in the food compartments.



## Who's Who at Springfield



On the steps of the Stonehaven Hotel: Front Row, Left to Right—Gardner Poole, Boston, refrigerating engineer, Clarence Birdseye; Richard Hellman, General Foods; Dr. Ludwig Roselius, Berlin, Germany. Back Row—R. W. Sinks, Frigidaire; F. S. Snyder, Institute of American Meat Packers; L. H. Sherrill, advertising manager, Frosted Foods Co.; C. T. Mutchner, Frigidaire; B. J. Vandoren, Frigidaire; J. Lookey, Berlin, Germany.

## PROLONGED

### Springfield Campaign to Continue

(Continued from Page 1, Column 5)

As the campaign goes on and the routine becomes more settled, opportunities arise for more thorough study of the situation. In the last week or two the women demonstrators at some of the stores have been spending some of their mornings in canvassing their territories, going from house to house in the neighborhoods served by their stores and checking up on various points. Mrs. Grace M. Blythe, who is stationed at the Long Meadow Thrift store, found in her first two days of canvassing that the housewives in eighty per cent of the homes at which she called had tried the Birdseye foods, and most of them had bought them more than once. Now and then she encountered someone who had not even heard of the Frosted Foods, but that experience was rare. She asked a few questions in regard to how the foods had tasted, supplied information in regard to cooking them, told about the Saturday specials, and made of each visit a combination checkup and solicitation. She encountered a few complaints, but none of a serious nature. Other demonstrators report similar experiences, although in other neighborhoods the percentage of homes in which the Frosted Foods had been used was not quite so high. This is due to the fact that Long Meadow is a suburban community with only a small group of

stores, and the average householder is sure to know something about products so well advertised as the Birdseye products have been. Word of mouth advertising also is a big factor in such a neighborhood.

Complaints were mentioned in the last paragraph. No one should be foolish enough to think that the Springfield sales campaign has been going on for nearly eight weeks without developing a certain number of complaints. Where complaints have been made, however, every effort has been made to get at the trouble and remedy it if possible. The result has been that many cases are found where failure to follow directions in cooking the frozen products has impaired their quality. There are, of course, a certain proportion of cases in which the purchaser has received cuts of meat that were tougher than they should have been, or were lacking in flavor. No matter how much care is taken in packing meat, a few cuts of indifferent quality manage to get in with their betters. In some instances the complainants have been induced to try once more, and the second purchase generally has been found satisfactory.

### A Tale of Two Steaks

A typical example of this situation was furnished by an executive in a local manufacturing plant. He was strongly prejudiced in favor of quick-frozen foods, probably because his company is making some of the machinery used in preparing them. He asked his wife to buy a Birdseye porterhouse steak, which she did. Upon eating it, he reluctantly agreed with his wife that it was rather tough and poor in flavor. That seemingly ended the career of Birdseye foods in his household, much to his regret. A few nights later he and his wife were dining with some friends, and both remarked on the tenderness and good flavor of the steak which was served. Their hostess proudly informed them that it was one of the new Birdseye steaks, so at present the score is tied so far as that particular family is concerned.

In proportion to the business done, the number of complaints has been remarkably small. Probably the most frequent, and at the same time the most justifiable, criticism, is that some of the meat items, especially the chops, contain too much fat to suit the taste of the average Springfield resident. It so happens that Springfield is a lean meat town, and cuts that would be satisfactory in other cities, even in Boston, a comparatively short distance away and right in the same state, are too fat for Springfield. The problem involved in cutting chops so that they can be sold in packages of uniform weight makes it extremely difficult to regulate the amount of fat at the same time. Those in charge of the Springfield campaign are fully alive to this problem, however, and future packs of meats will come closer to satisfying Springfield's exacting tastes. As the production and marketing of quick-frozen foods develops, producers will find it necessary to watch certain community tastes, and send lean meat to one city and the fatter cuts to places where they are appreciated. It can be done, but it will all take time.

### Large Orders Reported

Several fairly large orders have been reported. One of the largest included fish, meat and vegetables for a big dinner party; in fact, so far as possible the

dinner was a Frosted Foods dinner throughout. The lady who gave it is of a retiring nature and declined to permit the use of her name or to tell how her guests liked it, but there is every reason to believe that it was a complete success and helped greatly to spread the good name of Frosted Foods.

With the arrival of warm weather many inquiries are heard in regard to the possibility of buying quick-frozen meats and taking them to camps and resorts for week-end supplies. This is being done satisfactorily so far as the meats will keep in good condition for several hours even without refrigeration. The advisability of seeking this sort of trade in the hottest weather is still a matter of doubt that probably will have a thorough test in the next month or two.

### Behind the Counter

Supervision of the Springfield sales campaign is being carried on by a selected group of men under the direction of R. D. Holbrook, of the General Foods Corporation. Mr. Holbrook is constantly on the lookout for consumer reactions, and in the two months since the sales tests began has been a constant and alert observer of the buying public. Not content with mere observation from the standpoint of an inconspicuous on-looker—his usual role when he makes his rounds of the stores—he has donned a white apron and worked behind the counter in order to establish even closer contact with the purchasers of the Birdseye products. Meeting the customers face to face in this way has helped him greatly in planning his work.

The training of the demonstrators and salesmen was in Mr. Holbrook's hands. They report to him when he makes his rounds, tell him of the volume of sales, the comments favorable or otherwise that have been made, how the display cases are behaving, and any other items of interest. As a result he has a grasp of the whole situation that no one else has, and can sense how things are going on any given day long before the final sales figures are in. He and two other men make the rounds of the stores daily. The General Foods Corporation is making the Springfield test as thorough a field operation as possible.

Competition between the stores is encouraged by prizes which are awarded each week to the store leading in sales, and to the store making the biggest gain over the previous week's record. These serve to stimulate the interest of the men and women on the firing line and have aroused keen rivalry.

### Stores Uniformly Successful

Although the stores selected for the test include three independent stores, one member of a big chain, and a group of stores forming a strictly local chain, the results obtained have shown an unexpected uniformity. The Rood and Woodbury store on Main Street is "north of the arch," as they say here, meaning that it is in what might be termed the less aristocratic portion of the city. It has a large number of foreign born customers who are notoriously careful buyers, and always has done a big fresh meat trade, selling cuts that are not as high in quality as those included in the Birdseye list. In spite of this fact, the store has done well and is always among the leaders, although, of course, its sales in proportion to the size of the store are not as high as

(Concluded on Page 6, Column 3)



**INSULITE**  
The Wood-Fiber Insulating Board

## Means A STRONGER MORE DURABLE CABINET

**Y**OUR cabinet insulation—of course it should have high insulation efficiency—it should be odorless—and not subject to rot or disintegration. But in addition to these properties, it is also important that this material be strong and durable, yet light in weight. Insulite **combines** all of these advantages.

Insulite is made from the strong, tough fibers of northern woods—chemically treated to resist moisture. It will not rot or mold under the most severe conditions, and will not disintegrate during the entire life of the cabinet.

The great tensile and structural strength of Insulite makes it possible to reduce the cabinet framing to a minimum. Insulite reduces labor costs, material waste, and speeds up production, because it is furnished cut to size, ready for application.

The public know the high insulating value, the great strength and durability of Insulite. Let the public know that your cabinet is insulated with Insulite—it will mean quicker sales and more of them.



WRITE FOR ADDITIONAL INFORMATION AND SAMPLE  
**THE INSULITE CO.**  
(A Backus-Brooks Industry)  
1200 Builders Ex., Dept. 30E  
Minneapolis, Minn.  
737 Conway Building  
Chicago, Ill.  
OFFICES in all PRINCIPAL CITIES

MAIL THIS COUPON  
THE INSULITE CO.,  
1200 Builders Exchange, Dept. 30E  
Minneapolis, Minn.  
Gentlemen: Please send me your folder describing the advantages of Insulite for Refrigeration Insulation. Also, a sample of Insulite.  
Name.....  
Address.....  
City..... State.....  
If more convenient write on margin.

## Beaming Birdseye Buyers





# Hundreds of thousands of Frigidaires

have **never**  
required any  
**SERVICE**

this is **ONE** reason why

**Other reasons  
why 3 times as many  
Frigidaire are now in  
use as any other make  
of electric refrigerator**

**3 times**  
as many Frigidaires are now  
in use as any other make  
of electric refrigerator.....

*Porcelain-on-steel* inside and outside of every household cabinet.

*Surplus Power* to keep food safely cold, even on the hottest days.

*The famous "Cold Control"* which makes possible extra fast freezing of ice and desserts.

*Unit at the bottom* out of the way, leaving the top flat and usable.

*The new Hydrator* which keeps vegetables fresh and even revives wilted vegetables.

*Elevated food shelves* that eliminate stooping.

*Permanently quiet operation*—the result of recent and outstanding improvements and refinements.

*Low cost.* Frigidaire prices are low and the operating cost is but a few cents a day.



If you want to make money selling electric refrigerators, join the most successful dealers in the industry—now. Sell the make that has outsold all the others combined. Sell Frigidaire! Write for full details about the Frigidaire franchise—today.

Frigidaire is sold with a definite guarantee—backed by General Motors.

And still more important to you as a purchaser is the fact that year after year Frigidaire continues to give satisfaction—long after the guarantee has expired.

If service should be required it is rendered instantly and without removing the machine from the premises.

**FRIGIDAIRE CORPORATION**

*Subsidiary of General Motors Corporation*

Dept. M-21, DAYTON, OHIO



## REFRIGERATED FOOD SECTION ELECTRIC REFRIGERATION NEWS

The Business Newspaper of the Refrigeration Industry

Published by

BUSINESS NEWS PUBLISHING CO.

550 Macabees Building, Woodward Avenue and Putnam Street  
Detroit, Michigan. Telephones: Columbia 4242-4243-4244

F. M. COCKRELL, Publisher

WILLIAM JABINE, Editor

FREDERICK W. BRACK, Advertising Mgr.

JOHN DRITTLER, Managing Editor

GEORGE N. CONGDON, Business Manager

Eastern Manager: H. A. DeLashmuth, 1950 Graybar Bldg., New York, N. Y.  
Phone Lexington 9113

Chicago Representative: F. W. Henkel, 306 S. Wabash Ave., Phone Wabash 6668

Copyright 1930 by Business News Publishing Co.

Vol. 4, No. 18, Serial No. 94

May 7, 1930

### Springfield

ACCORDING to the plans and specifications, this column in this issue of the Refrigerated Food Section was to be devoted to a post mortem discussion of the Springfield sales experiment in the marketing of quick-frozen foods. When the General Foods Corporation began the campaign in Springfield, the announcement was made that it would run for sixty days. The sixty days are up, but the campaign still goes on. What is the answer?

The answer is just this. The Springfield experiment has proved so successful, has revealed so much valuable information in regard to the possibilities of quick-frozen foods that it is to be continued for another thirty days, and then a second campaign on a bigger scale is to get under way in another New England city.

When the General Foods Corporation began its work at Springfield even the most enthusiastic men among the group in charge of the work had grave doubts. They didn't know for example how strong the well known prejudice against "cold storage food" would prove. They anticipated much headshaking and hesitation from the housewives of conservative New England. They expected a host of objections, some of which never once made their appearance.

From the start, they were agreeably surprised. The people of Springfield liked the new products immediately, and the number of purchasers grew steadily. The percentage of repeat orders went up like a rocket until now it is around the eighty per cent mark. Complaints were few and a policy of getting right after every complaint that was made to anyone identified with the work, speedily eliminated many objections, that otherwise might have been magnified into serious difficulties.

Well planned management has characterized the campaign in every stage. Clever advertising, smart salesmanship, and both backed by a sincere belief in the products themselves, have been evident to every information seeking visitor to Springfield in the last two months.

The Springfield campaign is a good job well done. The success which it has attained will benefit the cause of quick-frozen foods in every part of the country. Every other producer of the new frozen products will find that it is a little easier to sell his goods than it would have been if the General Foods Corporation had not tried out Birdseye frosted foods on so extensive a scale.

The Springfield experiment points the way to the whole industry.

### Summer

WITH the coming of the summer months, frozen foods will undergo a real test. They will be sold to the public under the most adverse conditions, and it will take the greatest possible care all along the long line from producer to retailer to make certain that they are in proper condition when they reach the hands of the consumer.

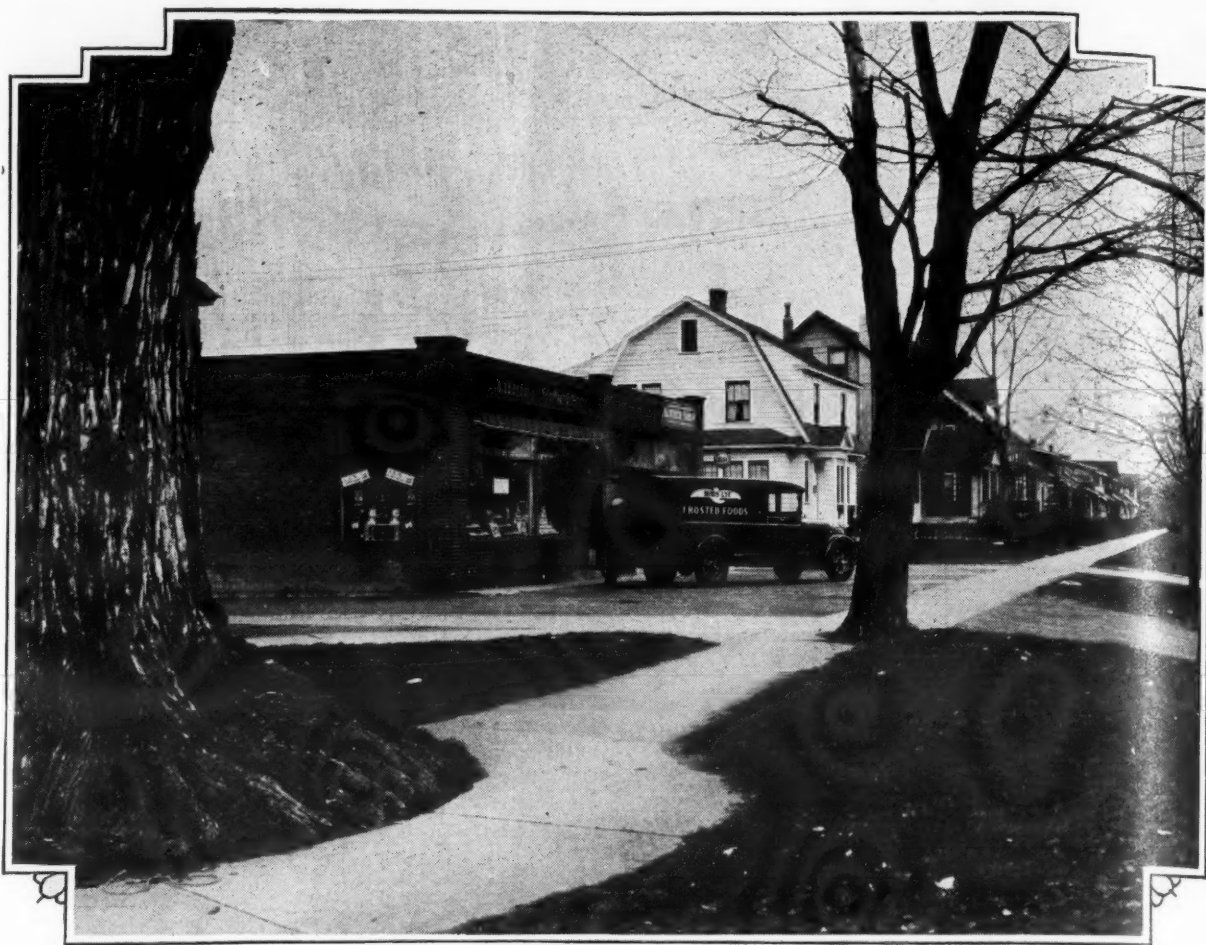
This applies not only to quick-frozen foods but to other varieties of frozen products which have been put on the market in the last few years. Some of the most dejected victims of careless or ignorant handling that reached the consumer last summer were frozen strawberries. In many cities they were sold to the public in such shape that it will take considerable education to reestablish the faith of those communities in frozen foods of any sort.

In most cases where this occurred, lack of knowledge in regard to how frozen products should be kept was responsible. The retailer was told nothing about the temperatures at which he should keep them; in some cases no one even took the trouble to tell him that he ought not to try to handle them unless he had refrigerated cases in which to keep them.

That sort of thing should stop. Every retailer who plans to sell frozen products of any kind this summer should inform himself in regard to the equipment necessary for handling the products he intends to stock. There are plenty of display and storage cases on the market capable of maintaining a wide range of low temperatures. The manufacturers of these cases are more than willing to talk about them and tell inquirers what they will do.

Frozen products must be kept properly during the summer months. There is no excuse for failure on that point.

## Birdseye Frozen Food Sales Good in Quiet Neighborhood



THE Thrift store at Long Meadow is a typical neighborhood store in a suburban community. Long Meadow is a separate village just south of the Springfield city limits on the main road to Hartford. The store is around the corner from the through highway, and the character of the community can be judged by an inspection of the houses along the street stretching away in the background. The photograph was taken a moment after the Birdseye insulated truck, which delivers Frosted Foods to stores where they are sold, had pulled up in front of the door.

### PROLONGED

(Concluded from Page 4, Column 5)

those of some of the others. It is the biggest store of the ten in which the Frosted Foods are on sale, and because of that fact should be on top. Of the Thrift stores, that at 719 Summer Avenue, in an entirely residential district, always does well, and two of the independent stores, Broughton and Fleming and Davidson's market, also in residential neighborhoods, are making excellent records. At both of these stores a large percentage of customers prefer to telephone their orders, and frosted foods are frequently ordered in this way. As a matter of fact, their uniform quality makes them readily salable to the customer who has no time to visit the store and so foregoes the privilege of overseeing the selection and cutting of her order of meat. The downtown Thrift Store at 140 State Street is popular with the men to whom has been turned over the job of bringing home food supplies. That fact helps its sales.

Since the passing of Lent sales of meats have shown a noticeable increase. This is particularly observable at the week-end sales of roasts. Lamb chops have held their place as one of the most popular items, but raspberries, as measured by the number of packages sold, constitute perhaps the most popular item, owing to the novelty of obtaining, out of season, raspberries that appear to have been fresh-picked. New additions to the line, including chicken, asparagus and other items, are awaited by consumers with much interest.

A growing trade from Connecticut cities and towns has developed in the Birdseye lines. This is particularly true of residents of Hartford and vicinity, who come to this city or give their orders by mail or telephone, but the trade is said to extend as far south as New Haven. Families in Boston and other places in the eastern part of Massachusetts have become regular buyers. Some of the best customers live outside Springfield. It is observed that doctors' families manifest more than ordinary interest in the foods, in many cases, which is considered a good sign.

With the addition of the new products a stimulation of consumer interest is expected, and it is probable that all previous records of the campaign will be broken. Advertising in the Springfield papers will be continued, and the greater variety of products will give an even better chance for studying public taste than has been furnished thus far.

The warmer weather will undoubtedly submit the display cases to considerable strain and their performance will be watched most carefully. They have been in fine shape in the last few weeks and have had no difficulty in maintaining the low temperatures desired. Both Ottenheimer and Frigidaire cases, although differing in design and size, are doing a good job, and the men in whose stores they are operating have had no

complaint in regard to their ability to hold the proper temperatures. Improvements in design probably will be necessary, and bigger cases than those now in use certainly are needed.

Springfield is in the Connecticut Valley, one of the best tobacco regions in the world. Good tobacco requires high humidity, so the display cases have a humidity test ahead of them in Springfield that will give them a real chance to prove their worth.

### ROSTER

TWENTY-FOUR companies have announced display and storage cases designed for retailing and storing the new quick-frozen products in the columns of the News. Manufacturers included in the first (March 26), second (April 9), and third (April 23) Refrigerated Food Sections are as follows:

American Foundry Equipment Co.  
Blazek & Co.  
Commercial Refrigerator Mfg. Co.  
Downing Mfg. Co.  
H. Ehrlich & Sons Mfg. Co.  
Elkins Refrigerator & Fixture Co.  
Federal Refrigerator Co.  
Ford Refrigerator Co.  
Frigidaire Corp.  
General Electric Co.  
Gibson Refrigerator Co.  
C. V. Hill & Co.  
Hussmann Refrigerator Co.  
Koch Butchers Supply Co.  
Ligonier Refrigerator Co.  
Marsden Store Fixture House.  
McCray Refrigerator Co.  
Northey Mfg. Co.  
Nu Way Fixture Co.  
Ottenheimer Bros.  
C. L. Percival Co.  
Servel, Inc.  
Smoot-Holman Co.  
Warren Co.

In addition to the above mentioned, a number of manufacturers of refrigerating machines are co-operating with producers of display cases and refrigerators. Among these companies are:

American Foundry Equipment Co.

Copeland Products, Inc.

Frigidaire Corporation.

Kelvinator Corporation.

Servel Sales, Inc.

### EAST ORANGE GROCER BUYS DISPLAY EQUIPMENT

New York, N. Y.—The first sale of a case for the retailing and storing of quick-frozen foods was made recently by the Frigidaire distributor here to G. E. Schaafs, a grocer of East Orange, New Jersey.

Refrigerated cases for grocers, butchers, etc., have been exhibited by the Domestic Electric Company for some time. The first sale was closed by the Newark office of this company. With producers of quick-frozen foods gradually expanding distribution, the local distributor is planning an active campaign to line up this commercial business.

### FARMING

JOHN MILLER has a ninety-five acre farm near Utica, Mich., with all the recognized city conveniences, such as an electric range, refrigerator, water heater, etc. The farm is among the first completely electrified in Michigan, the Detroit Edison Co. doing the work.

Up to the present time about \$2,600 have been invested in electrical equipment and the saving in the all-electric installation is easily noted in year's electric bill, which amounts to \$137.99 for twelve months' operation. The average cost per kwh. is about 2.549 cents. The installation includes, in addition to the complete wiring system, a water system for both house and barn, an electric refrigerator and range, water heater, milking machine, milk cooler, feed grinder, hay hoist, tool grinder, clipper, ventilating system, and a 5-horsepower portable motor.

During the year 1929, the cost of refrigeration in the farm home averaged about 67 cents per month, or \$8.01 per year. Total kwh. consumption for this refrigerator for the year amounted to 312. For milk cooling 41 kwh. were required at a total cost of \$1.05 per month. The milk cooling system is comprised of an Esco cabinet and a small condensing unit.

### SPRING

Bloomington, Ill.—Spring brings the year's greatest loss from food spoilage through changeable weather, according to the Williams Laboratories, which pointed out today that tests reveal many foods spoil rapidly at 50 degrees or more.

"As the temperature rises, dangerous bacteria multiply," said President Walter W. Williams. "Spring-time changes in temperature of twenty to forty degrees within a few hours are as dangerous to foods as they are to persons. Without proper protection, health of the whole household is frequently threatened by tainted foods."

"Simple little precautions are improving public health. Proper food preservation also cuts down the cost of living by preventing spoilage. With old-fashioned cooling methods it was impossible to keep the family food supply safe between slightly more than 32 degrees and a little less than 50 degrees. This now is known to be the range within which foods are kept best, with least multiplication of bacteria."

"Even when spring days turn unseasonably warm, automatic cooling of foods continues unchanged. Left-overs, instead of spoiling and having to be thrown out, can be converted into wholesome, economical dishes. Milk, favorite breeding spot of harmful bacteria, stays safe and sweet instead."



## PROPRIETOR

Of Springfield Thrift Stores Is Firm Believer in Future of Quick-Frozen Foods

ONE of the men most keenly interested in the Birdseye Frosted Food sales experiment in Springfield, Mass., has thus far had little to say. His interest has been something more than academic, because he happens to be the proprietor of the chain of Thrift Stores, six of which have been selling the Birdseye products in co-operation with the General Foods Corporation. His name is C. F. Meek.

In a talk with a representative of the Refrigerated Food Section of ELECTRIC REFRIGERATION NEWS, Mr. Meek spoke with great enthusiasm of the future of quick-frozen foods and the results accomplished in Springfield. Long before the General Foods Corporation came to him with their plan to sell Birdseye foods in his chain of stores, he had been following the progress of quick-frozen foods with intense interest, because he saw in the new process a chance to attain standards of both price and supply for products at present subject to violent fluctuations. He now sees his vision much nearer to accomplishment than it was two months ago.

A word or two about Mr. Meek will give some idea of the experience on which his judgment is based. He has been selling foods most of his life, beginning in Missouri, where he learned the business and operated what he describes as an old-fashioned grocery store with goods sold from barrels and boxes, and delivered by horse and wagon. While operating his Missouri store, he began to have some ideas about improvements, and after thinking them over came to the conclusion that although perhaps his ideas wouldn't work in Missouri, they might somewhere else. "I decided to get out of there and go some place where there were lots of people," he explained. With that object in mind, he headed for New England, and settled down in Springfield, where he has been ever since. He still keeps his Southern accent, despite more than ten years among the Yankees.

There are ten stores in his Thrift chain, all of them in Springfield, and they all operate on the cash and carry system, including a number of variations in method, for which he is responsible. They are well liked and attract a good class of trade.

Mr. Meek has watched the progress of the Birdseye campaign with keen attention. He regards it as a success. It has even exceeded his expectations, al-

though from the start he was prejudiced in its favor. In all of his stores in which Birdseye products are being sold, new customers have been brought in. The sale of quick-frozen meats in packages has given him a chance to add a meat department to his stores, something which they have lacked.

He is not wholly satisfied with the present method of selling the quick-frozen foods. He believes that cases should be built that would enable the customer to come in and select her own packaged meat, just as she now does in the case of other goods. He thinks that the salesman behind the counter should not be necessary.

Mr. Meek's satisfaction with the progress of the Springfield campaign is a good sign. He is an experienced merchant, he knows foods, and he knows his public. His favorable opinion means more than that of almost any other person identified with the Springfield test. He typifies the retailer, without whose enthusiastic co-operation quick-frozen foods cannot succeed.

## CONSUMERS

PURCHASERS of Birdseye products in Springfield readily comment on the qualities of the quick-frozen foods. "I have demonstrated to my satisfaction that meats prepared by the Birdseye process will not shrink in cooking, like meats sold in the ordinary way," said the wife of a leading physician in the Armory Hill neighborhood. "I prize the new foods for their flavor, and so does my husband, who is particularly impressed with the quality of the spinach. Its iron content appears to be exceptionally high."

Another fastidious customer, the wife of a professional man, is buying the Birdseye foods extensively. "I shall never buy fish marketed in the old way," she said. "The flavor of the product instantaneously frozen, with the juices preserved, is far superior. I believe, for one thing, that the iodine in the fish is preserved better in this way."

The wife of a Longmeadow lawyer, after trying all the different lines, regards lamb chops as perhaps the most delicious as compared to the ordinary market product, while also holding a strong liking for the raspberries and loganberries.

## When Greek Meets Greek

### COPELAND ΨΥΓΕΙΑ ΚΑΤΑΣΤΗΜΑΤΑ

Ουσιαστικά—χαμηλά τιμά—μεγάλης άντοχής—  
—Εξαιρετικά—υπερόπτιος εγγύησης.  
Αυτή είναι εἰς ὅλους λέξεις ἡ ἱστορία τοῦ COPELAND.

Τὸ ὄνομα COPELAND εἶναι τὸ τρίτον παλαιότερον ὄνομα ἐν ταῖς Ἑνωμέναις Πολιτείαις ἔχον

LAND εἶναι καὶ τὰ ἑξῆς:

Ἡροδότου ἀποδείξεις διὰ ταχέως ψυχρῶς  
να κρύβεται.

COPELAND • NELSON ψυγεία πα-  
γωτός.

FOREIGN language papers are now carrying the message of proper food preservation in the home. For example, recently two large distributors of electric refrigeration in Chicago placed advertising in a Greek medium published in that city. As you probably note, the advertisements which are pictured on this page are in Greek, and the only obvious words in English are those of Copeland and Frigidaire. In selecting this medium for their advertising, Copeland and Frigidaire seem to be putting full faith in the popular theory that when Greek meets Greek they open a good refrigeration prospect?

These advertisements, one by the

Copeland Refrigeration Company and the other by the Stover Company, Frigidaire distributors, were in the newspaper "Salonki," which has a large number of readers. No doubt, the appearance of these advertisements will have much to do with the uncovering of new prospects for electric refrigeration. In many cases where the reader is a restaurant owner, such advertising may possibly make him a good prospect for a commercial refrigerator, an ice cream cabinet and other refrigeration equipment. The ads as they appeared in that publication were of a much larger size than indicated here. The two here only represent about one-third of the total space used.

### FRIGIDAIRE Δ' ΕΣΤΙΑΤΟΡΙΑ ΚΑΙ ΛΟΙΠΑ ΚΑΤΑΣΤΗΜΑΤΑ

Τὸ ψυγεῖον εἶναι ἐν κοινῷ λόγῳ ἀπὸ ἀπο-  
νάται νὰ ἐλαττωθῇ κατὰ πολὺ ὅταν τὸ FRIGI-  
DAIRE ἀντικαταστήσῃ τὸν τρέχοντα ἀγόν.

Χιλιάδες ἰδιοκτητῶν ἐστιατορίων ἐξαικονόμη-  
σαν μεγάλα ποσὰ διὰ τῆς χρησιμοποιοῦσας τοῦ  
FRIGIDAIRE καὶ τεματίσας τὸν κοινὸν λό-  
γον ἀγόν.

Τὸ FRIGIDAIRE διατηρεῖ πάντοτε τὴν ἀ-  
παιτούμενην θερμοκρασίαν ποῦ θέλετε διὰ τὴν δια-  
τήρησιν τῶν τροφῶν.

# Lower Temperatures Less Running Time of Machine Permanent Efficiency Safe Preservation of Food

You can assure your customers of these desirable features by selling Dry-Zero insulated refrigerators. Demand them from your manufacturer—they cost no more.

## THE ACTUAL FACTS

Tests have been made by impartial national authorities such as U. S. Bureau of Standards, Technical Institutes, State Universities, etc., to ascertain

the insulating value and moisture absorption of commercial insulating materials. Here is a summary of the facts so established.

Material	Insulating Value	* Moisture Absorption
DRY-ZERO	4.15 to 4.3	14
Corkboard	3.1 to 3.3	28
Wood fibre board	2.7 to 3.3	66 to 115
Flax fibre board		
Cane fibre board		
Mineral wool slab		

\* The Dry-Zero fibre, Ceiba, is the same as that used in all U. S. Navy life jackets.

DRY-ZERO CORPORATION, 130 N. Wells St., Chicago, Illinois

# DRY-ZERO

THE MOST EFFICIENT COMMERCIAL INSULANT KNOWN



### TO MANUFACTURERS OF ELECTRIC AND GAS UNITS

If you want CABINETS  
as you want them let  
PUFFER-HUBBARD  
build them. We work to  
specification.

Puffer-Hubbard Mfg. Co.  
MINNEAPOLIS, MINN.

### COPELAND ACTIVE IN NEWPORT NEWS

Newport News, Va.—The Copeland Electric Refrigeration Co. reports sales of Copeland units and Larkin coils to following stores and dairies: Cone Dairy, Newport News; Dr. G. L. Smith Dairy, Morrison; Sanders' Market, Phoebus, Va.; D. Smith & Son's Market, Newport News; Peterson Grocery Co., Newport News; S. J. Bonewell, Morrison, Va.; Langley Hotel, Hampton, Va.; W. J. Furlington, Morrison, Va. Commercial sales are on the increase and the Copeland Company here plans to smash all previous sales records.

*This is a National Message to the  
American Housewife*

### Good Housekeeping Institute

**Recommends** Proper arrangement of foods in your refrigerator, and KVP advises the use of Proper Papers for food wrapping and protection. There is a big difference—to get the most good out of your refrigerator are you using both KVP Refrigerator Papers?

There's Household Parchment for cooking and for wrapping all greasy, moist and wet foods—it's boil-proof—it wears—use it again and again. KVP Heavy Waxed Paper "Cutter Box" seals tight (one sheet will do)—keeps the moisture in or keeps the moisture out as desired. Remember, all foods should not be wrapped in Waxed Paper—for 100% results use the famous pair of KVP food wrapping and cooking papers.

Try your Grocer, Stationer, Hardware, Department Store and Neighborhood Merchant first; if they cannot serve you, KVP will pay the parcel post.

Send \$1.00 for the two big 50c rolls (West of Missouri and South Coast States, 60c per roll, both for \$1.20 postpaid).

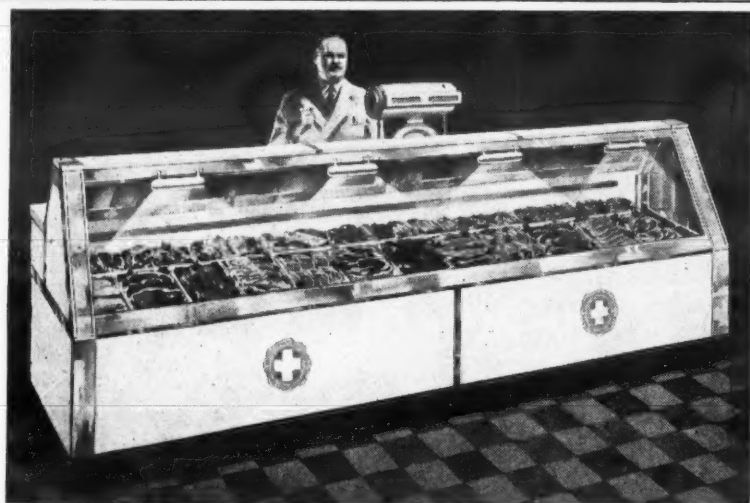
**FREE** When ordering, mention this ad for a Miracle Paper Dish Rag and interesting samples for you and your friends.



STANDS FOR "THE WORLD'S MODEL PAPER MILL"  
KALAMAZOO VEGETABLE PARCHMENT CO.  
KALAMAZOO MICHIGAN U.S.A.

MANUFACTURING WORLD-WIDE FAMOUS FOOD PROTECTION PAPERS

If you are in any way interested in Electric or Gas Refrigeration... read the above over twice because it will mean much to you... this is our National message to the American Housewife in cooperation with your refrigerator sales campaigns. Write for samples and advertising ideas that sell your refrigerators to new customers and keep old customers interested.

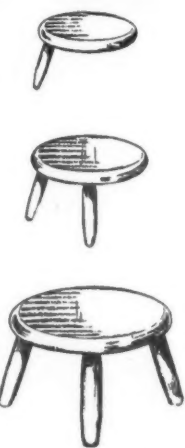


## IN FOOD STORE REFRIGERATION MAKE SURE YOU GET

1. uniform low temperature
2. controlled humidity
3. revolving air circulation

**CORRECT** humidity control and natural revolving air circulation are vital in food store refrigeration. Unless these essentials are correctly combined with uniform low temperature the food merchant suffers serious losses from spoilage and dehydration.

The new 5100 Hussmann Patented Quick Service Display Counter provides controlled humidity and natural revolving air circulation. Actual tests with this new Hussmann show dehydration of less than 1/2 of 1%. Ask for all the facts.



# HUSSMANN

Refrigerator Division

ALLIED STORE

ASU

UTILITIES CO.

General Offices—Saint Louis

Sales Representatives in all principal cities

## Restaurateurs See Big Sales Appeal in Refrigerated Foods



**M**ECHANICAL refrigeration is doing its bit to keep the foods served in the Quaker Lunch Room in Grand Rapids, Michigan, in palatable condition. This installation was made by the F. C. Matthews Company, Frigidaire distributors for western Michigan. The two large refrigerators that occupy places of prominence in the kitchen are capable of refrigerating large amounts of perishables. Vegetables, fruits, meats, eggs, and other products are stored in the refrigerators until they are needed. Having the refrigerators placed at strategic points in the kitchen facilitates quick service.

Large fin coils provide sufficient cooling area and in this way the temperatures in the refrigerators can be kept at the proper mark. Judging from the size of the restaurant, a heavy load must be imposed on the refrigeration system during the rush, because at this time the demand for refrigerated food is at its peak. Frigidaire compressors

furnish the refrigeration for these two cabinets. The advantage of having two large cabinets is that sufficient quantities of food can be stored in them to take care of the peak hour demands.

Mechanical refrigeration is becoming quite popular in restaurants, where proprietors are always on the outlook for improvements in the methods of preserving, preparing or serving foods.

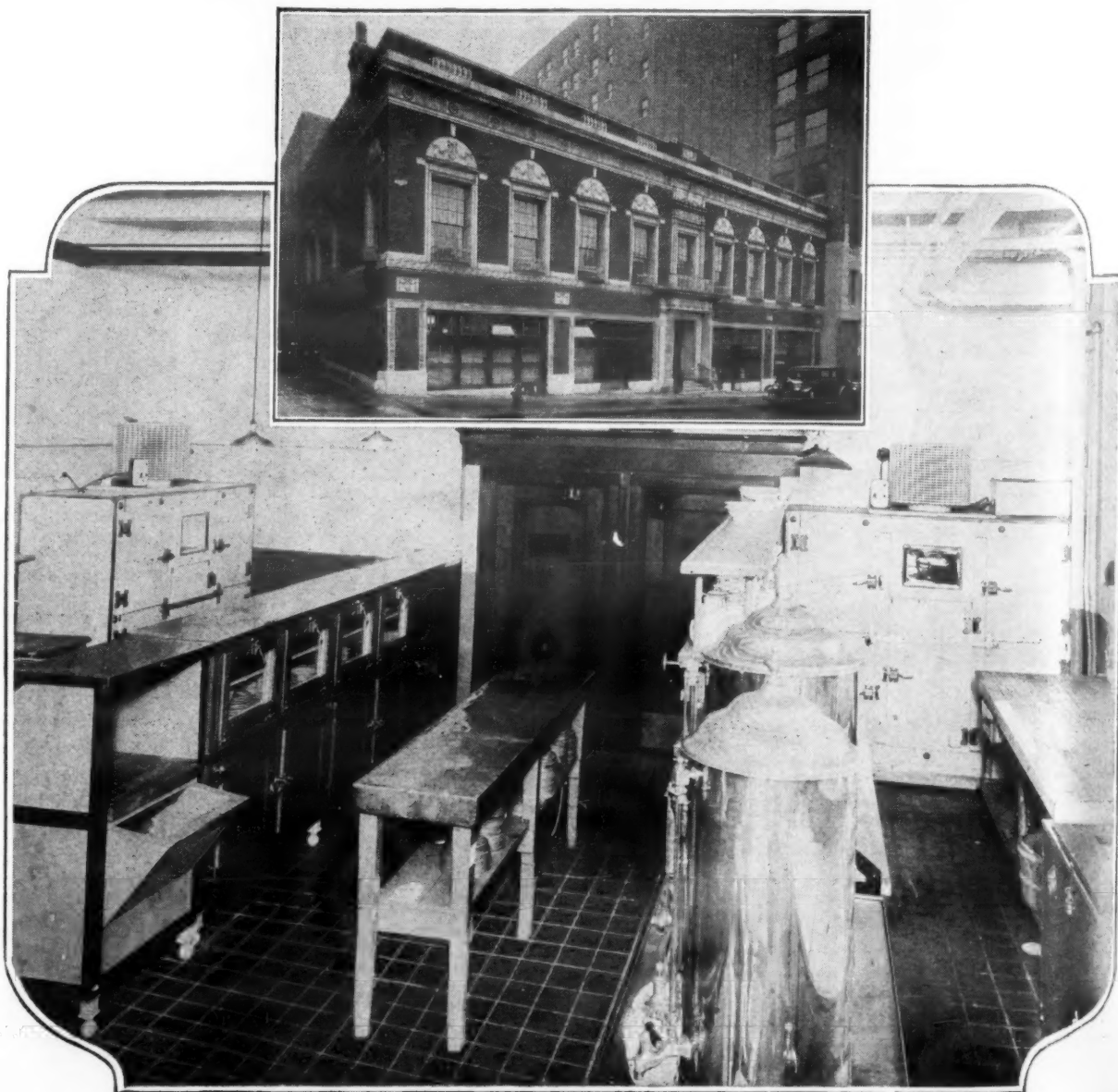
## Two Big G. E. Commercial Refrigerators Popular with University "Grads"

**I**N Kansas City, the University Club has two large General Electric commercial refrigerators, which make it safe for the "grads" to be hungry. Glueck & Co., General Electric refrigerator distributors, installed these two

units some time ago, and now the club members are strong advocates for mechanical refrigeration because it assures them that foods will be always kept in the right manner.

About 200 to 300 luncheons are served

daily to members, and a large number of foods mentioned on the menu are kept in the big cabinets which stand well out in the kitchen environment. Both models are of the C-450 type, each having five service doors.





## CALIFORNIA

### Experiments With Quick-Frozen Products and Producers Predict Big Future

By Frank W. Gray

ALTHOUGH the distribution of quick-frozen meat products in California is still on an experimental basis, an increasing interest and enthusiasm among the meat packing companies and retailers indicates that this method of preserving and transporting perishable meats will be used generally in the future.

Swift & Company, in Los Angeles, have thus far taken the initiative in the importation and distribution of quick-frozen meats in this territory. This company has steadily increased its storage facilities for these products, and has undertaken some pioneering among the retailers to determine the possibilities of a widespread distribution. One large grocery chain in Los Angeles has installed low temperature display cases in several of its stores, and is testing out the demand for quick-frozen products.

#### Proper Cases Are Scarce

The lack of low temperature storage and display facilities among the dealers, and their disinclination to make the investment necessary to provide such facilities, is a factor in holding back the general distribution of quick-frozen products. As for sales resistance, both packers and retailers report that a vague theory on the part of the public that frozen foods are not good foods seems to be the only reaction against this method of preservation. It is obvious that a little intelligent advertising would soon provide the education necessary to overcome this unreasonable prejudice.

The quick-frozen meat stuffs now being shipped to the Pacific Coast come in the regulation refrigerated cars, cooled with ice to the customary 35 degrees temperature. The quick-frozen products are packed in specially constructed cases, insulated, and internally cooled by cakes of dry ice. Subjected to the sharp temperature obtained in this way, the products arrive in perfect condition, even in the very hot localities such as the Imperial Valley, where the summer heat is intense. Upon arrival, the quick-frozen meat cases are stored in packing-house coolers, which are maintained at a temperature of zero.

No retailer is allowed to handle these products unless he has facilities for keeping same at a low temperature. When the consumer purchases the frozen meat he may keep it in his own ice box for about the same length of time that he could keep fresh meat without any deterioration. The meat may be gradually thawed out, or may be cooked while still frozen hard, the flavor in either case being the same as that of fresh meats.

#### Few Frozen Vegetables Seen

The production and distribution of quick-frozen vegetables, while coming in for considerable attention, seems to be more indefinitely in the future than is the case with meat products. The reasons for this are that vegetables, even in the quick-frozen condition, are not so adaptable to packaging.

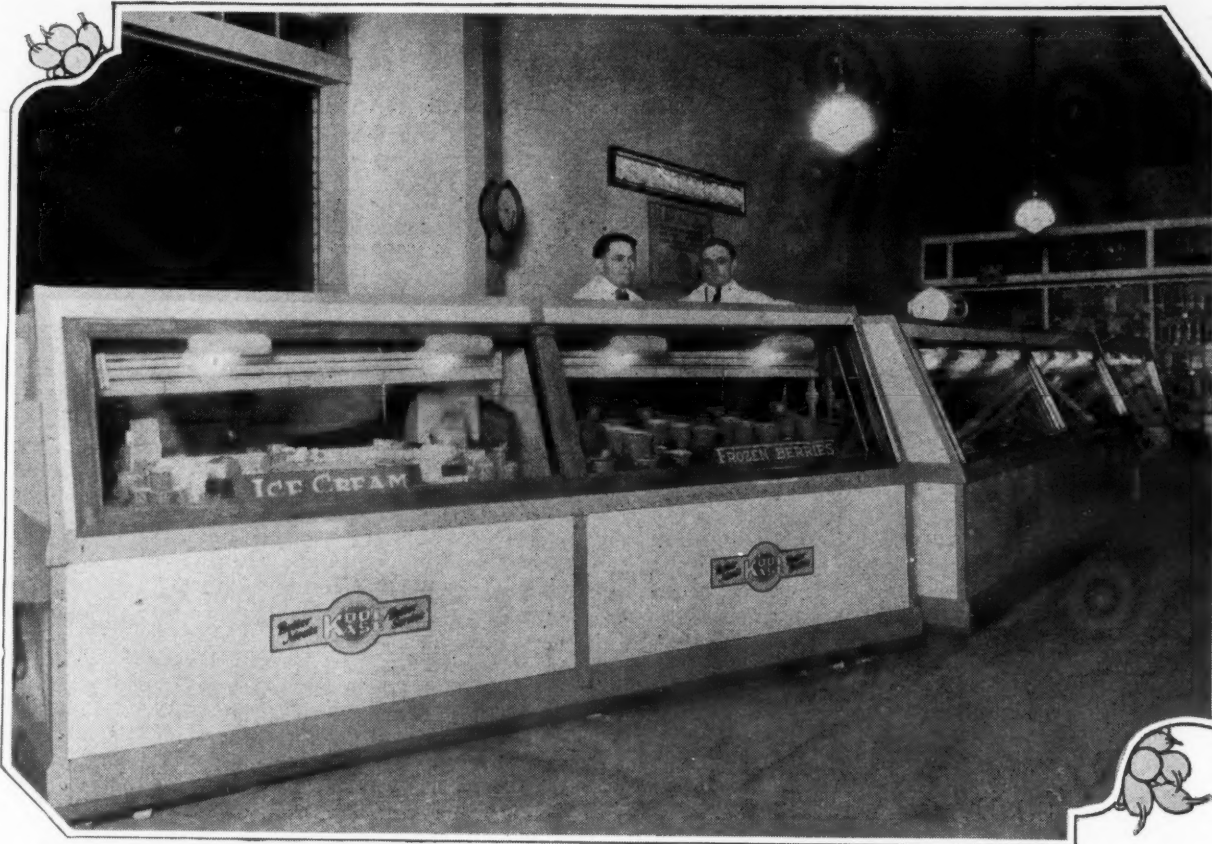
Tests have been made in Los Angeles with perishable fruits, frozen under extremely low temperatures, and eaten after many months of frozen storage. The results are reported as very satisfactory, the fruits having lost none of their freshness and flavor through the process.

#### Refrigeration Men Co-operate

As extremely low temperatures cannot be economically obtained with ice, electric refrigeration men are naturally very much interested in the introduction and general distribution of quick-frozen products. An attractive display of these products was recently put on both by the Frigidaire and the Kelvinator agencies in Los Angeles. Several of the refrigerated case manufacturers of Los Angeles are already building quadruple plate display cases adaptable to low temperature storage. Two of these firms construct their cases with the freezing coils already installed, ready to be hooked up to either sulphur dioxide or methyl chloride machines. The accepted design for this installation seems to be rows of coils below each of the shelves in the case, laid in parallel sections, and engineered as to surface area to produce very low temperatures in the heavily insulated counters.

It is certain that quick-frozen meats will meet with approval in the Southwest, in such territories as New Mexico, Arizona and Texas, where certain regions are subjected to intense heat during about eight months in the year. Preservation of fresh meats has always been difficult under such heat conditions, but the low temperature equipment should solve this problem very effectively.

## Frozen Foods in Los Angeles



Plenty of variety in frozen foods is offered to the patrons of this store, one of the Continental chain in Los Angeles. The two big Smoot-Holman cases have large storage capacity, and enable the store manager to keep an ample stock on hand. The store is at 39th Street and Avalon Boulevard.

## GET TEST FACTS

and get all of them!

We feel you are entitled to know just what happens to your refrigerator from its receipt until it goes out the back door.

Complete records, work sheets, everything concerning the test, are open to your inspection.

**GEORGE B. BRIGHT CO.**  
Refrigerating Engineers & Architects  
2615 12th St., Detroit



**DETROIT'S GREAT HOMELIKE HOTEL**

IN THE VERY HEART OF DETROIT

THE TULLER is the headquarters for tourists and travelers. Delightfully furnished, homelike atmosphere. Abundance of air and sunshine, large, spacious lobbies and lounging rooms. Famous for our restaurants.

**800**  
ROOMS WITH BATH  
\$2.50 and up

**HOTEL TULLER**  
Facing Grand Circus Park  
HAROLD A. SAGE, Manager

# Can't sag Can't settle

Celotex insulation can never settle or sag with time.

It comes cut to fit exact specifications so that each insulated area is covered with a single board of exactly the right length, width and thickness.

There are no open joints or seams in the insulation through which heat leaks into the cabinet.

*A special kind of Celotex.* The Celotex used to insulate refrigerators is fabricated by special processes that increase its insulating efficiency to the highest possible point. It meets the rigid requirements of leading refrigerator manufacturers.

*Stronger, more substantial cabinets.* The great tensile strength and rigidity of Celotex reinforces the walls and frames of cabinets.

*Clean, sterile, odorless.* Celotex Refrigerator Insulation is made from the long, tough fibres of cane, with millions of tiny sealed air cells that prevent the passage of heat. These fibres are carefully cleaned and sterilized... then waterproofed to prevent the absorption of moisture. They are

entirely odorless... sanitary in every way.

#### Use this powerful selling point

The men and women from whom your sales come, already know the name Celotex... know Celotex as effective insulation.

Tell them that your cabinets are insulated with a special kind of Celotex... of considerably increased insulating efficiency... and capitalize the nation-wide enthusiasm for Celotex in every sales-talk.

#### THE CELOTEX COMPANY

919 North Michigan Avenue  
CHICAGO, ILLINOIS

Sales distributors throughout the world  
In Canada: Alexander Murray & Co., Ltd., Montreal

The word  
**CELOTEX**  
(Reg. U. S. Pat. Off.)  
the trademark of and indicates  
manufacture by  
The Celotex Company  
Chicago, Ill.

**CELOTEX**  
BRAND  
INSULATING CANE BOARD  
REFRIGERATOR INSULATION



## The Imitation Food Products Co.

(Branch of The Artistic Production Co.)

107 Lawrence Street  
Brooklyn, N. Y.

Ask for our catalog of January 1, 1930.  
Direct sales only. "Indispensable with refrigerator display."

## STAHLSCHEMIDT SALES GOOD

Evansville, Ind.—Early spring brought fine weather and encouraging sales demand for Frigidaire units, according to F. C. Rhodes, manager of the Frigidaire sales and service department, Stahl-schmidt Piano Company, dealer here. In sixty days the local branch found purchasers for three carloads of Frigidaire units, he reports.

The Ideal Pure Milk Company and the Fred Miller Bakery and Ice Cream Company have purchased seventy Frigidaire ice cream cabinets each for distribution at the ice cream and refreshment places, Mr. Rhodes reports.

You can sell those big prospects who have no electricity

**Now!**

Fill their orders with



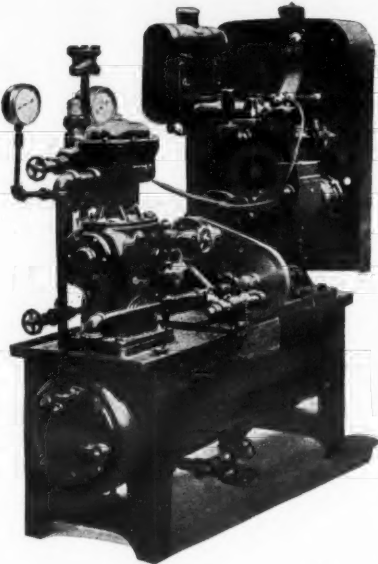
### Gas-Engine Driven Units

For commercial use, in dairies, country stores, plantations, summer resorts, on fishing boats, export work, etc.

The standard Frick Unit with gasoline engine in place of the usual motor.

Floor space required only 3' 8" by 1' 6". Operates semi-automatically.

Write for full details.



**Frick Company**  
WAYNE EDWARDS PATENT  
ICE MACHINERY SUPERIOR SINCE 1877

## Refrigerated Food is Popular Topic



LARGE audiences are greeting the members of the Kelvinator Home Economics Department at their every appearance at the establishments of distributors to lecture on various phases of woman's activities, including refrigeration, dietetics, culinary art, and kindred food topics of the day.

In this picture a crowd of women greeted Miss Marion F. Sawyer's appearance on the platform of the auditorium of the Northern States Power Co. at Minneapolis, surrounded by domestic Kelvinator models, which she used in her demonstrations of frozen cookery, etc.

Miss Sawyer, graduate home economist, manager of the Kelvin kitchen at the Kelvinator plant, author of the com-

pany's monthly culinary bulletins, and developer of its recipes, which are broadcast in various ways, is making a tour of cities north and south, where she is drawing large and representative audiences.

Miss Mary E. Kirk is also away on a similar tour. She drew large audiences recently at Chattanooga, Tenn., and other points.

THIS UNUSUAL PLAN ASSURES YOU

# Extra Profits

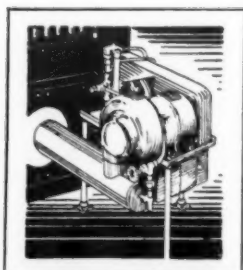
FROM YOUR OIL BURNER SALES

NATURALLY, you're entitled to a commission on any business you go out and dig up *yourself*. . . But how would you like to get a percentage of profit from the *other fellow's sales*? . . . That's precisely what happens when you sell the QUIET MAY Automatic Oil Burner . . . Thru an unique plan of participation, QUIET MAY dealers are put in a position to substantially increase their earnings each year by receiving a slice of the profits from the world-wide business of the May Oil Burner Corporation.

## QUIET MAY PROFIT SHARING PLAN

is to our knowledge without parallel in the entire oil burner industry . . . In 1929 thousands of dollars were given to QUIET MAY dealers in the form of year-end bonuses . . . Considered from any angle—the burner, itself—the strong advertising support we give it—the localized sales-promotion you receive—or the *extra profits* you make—a QUIET MAY dealer franchise is just about the best bet in the business . . . The coupon will bring you the whole story.

MAY OIL BURNER CORPORATION, BALTIMORE, MD.



MAY OIL BURNER CORPORATION  
Dept. D—Baltimore, Md.

5-D

If your dealer proposition is half as interesting as it sounds, I'd like to know more about it.

Name.....

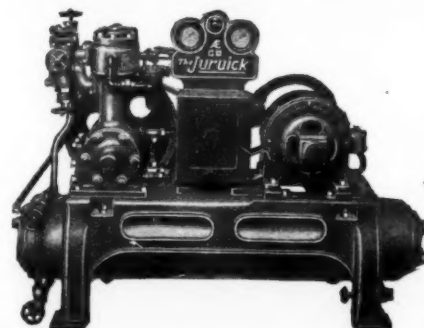
Address.....

City.....

State.....

## JURUICK REFRIGERATION

There is a type for EVERY need



A complete line of JURUICK AUTOMATIC units and AMMONIA COMPRESSORS of one-quarter ton to 40 tons refrigerating capacity provides economical service on big or little refrigeration jobs.

JURUICK insures smooth, silent performance, has automatic control, is easy to operate. It costs little to install and is easy for dealers to sell.

AMERICAN ENGINEERING COMPANY

2420 Aramingo Avenue,

PHILADELPHIA, PA.

## BIRDSEYE RECIPES

NOTHING is being left undone to popularize the Birdseye frosted products on sale in Springfield. Lists of recipes have been prepared, which are kept on hand at the various stores for the use of purchasers and of anyone who shows an interest in the quick-frozen foods. New recipes are added to the list from time to time, and there is a continuous demand for them.

Some of the recipes recommended recently to Springfield housewives are printed below:

### Birdseye Rib Roast of Beef

Use meat in either frosted or defrosted state, sear, uncovered in a very hot oven (500-550° F.) 30 minutes or until well browned. Add ½ teaspoon of salt to the pound and enough water to cover bottom of roaster about ¼ inch. Decrease heat slightly 450° and continue roasting until done.

### Birdseye Fillet of Sole

Have fillets slightly defrosted and roll in seasoned flour or corn meal, also dipping in egg. Place in slightly greased frying pan and cook until done.

### Imperial Sunshine Cake with Raspberry Filling

¾ cup sifted Swansdown Cake Flour  
½ teaspoon cream of tartar  
¼ teaspoon salt  
1¼ cups sifted flour  
½ cup water  
5 egg whites, stiffly beaten  
5 egg yolks beaten until thick and lemon colored  
1 teaspoon flavoring

Sift flour once, measure, add cream of tartar and salt and sift together four times. Boil sugar and water until a small amount of syrup forms a soft ball in cold water, or spins a long thread. Pour syrup in a fine stream over egg whites, beating constantly. Continue beating as mixture cools. Fold in egg yolks and flavoring; then flour a small amount at a time. Pour into ungreased tube pan. Bake in slow oven, 350°, 40 minutes; then decrease heat to 325° F. and bake 30 minutes longer. Re-

move from oven and invert pan 1 hour or until cold.

### Birdseye Planked Pork Chops

Boil, cool and peel three large sweet potatoes and cut lengthwise in slices. Panbroil slowly 6 pork chops. Place in a pyramid on a well heated plank. Surround with potato slices and apple rings which have been cut in thick slices crosswise, dipped in melted butter and fried until delicately browned. Scatter salt and brown sugar over both; place in broiler to finish cooking and brown. Serve with chili sauce or catsup.

### Birdseye Frosted Spinach

Have boiling salted water enough to cover bottom of cooking utensil. Add frosted spinach, allowing to boil 12 minutes. Serve as desired.

### Raspberry Filling

1 pkg. Birdseye Raspberries  
½ cup sugar

## COLORING THE ICE CUBE

Milwaukee, Wis.—Frying eggs on ice, freezing live fish and quickly reviving them again—these and other startling phenomena featured a dramatic demonstration of food preservation at the Public Service building auditorium on April 23. The display was in charge of Mrs. Vera B. Ellwood, director of home service for the Electric Co., Kelvinator distributors.

Various experiments were conducted with liquid air, which has an evaporation point of 312 degrees below zero, to show in vivid manner how cold retards bacterial development and how this principle has been applied in food preservation.

John Wylie, Detroit, spoke on "Common Sense Facts About Mechanical Refrigeration." Another feature was the demonstration of the making of frozen desserts, by Miss Mary Wilkinson, assistant home service director. Miss Wilkinson showed the audience how to make and use colored ice cubes and colored crushed ice, and how refrigerator cakes are made. She also discussed the new frozen meats, now making their appearance on the market in package form.



## SENSIBLE EATING

Should Replace Fantastic Dietary Theories Now  
All Too Common

By Mrs. Elizabeth Stone Macdonald  
Division of Consumer Research, Frigidaire Corporation.

WE are, to an incredible degree, what we eat. What we eat, however, is quite as much the affair of the mind as of the mouth. Lately, we have been taking so much thought about our diet that we stand in peril of wrecking our digestions. Less anxiety and more fun is what we need for nourishment.

No group sits down to a meal without somebody who worries over calories or vitamins. We have taken our dangerously small, and questionably diluted, knowledge of food science so seriously that we are turning eating, which ought to be a joy, into a dull and dreary drudgery.

Calories came in just before mah jong. The war stamped them on our minds as things to cut down. When we stopped saving them for democracy we saved them for ourselves. We studied weight, age, and height tables that indicated where we should tip the scales. Then we calculated the precise portions which would diminish or expand us. We ate

as the fact that we all have two eyes, a nose, and a mouth fails to make our faces a row of identical masks.

After the calory came the vitamins, even as the game of bridge succeeded mah jong. Three vitamins were at first industriously press-agitated by those enterprising advertising copy writers who wait for news at laboratory door-steps. We were threatened with diseases of which we had never heard, unless vitamins A, B and C were present in our diet.

More research revealed more vitamins. We are now in doubt as to their total number. Nobody, not even the scientists who first proved their existence and named them, knows exactly what they are. Like electricity, we know only some of the effects. Most of us are as hazy about them as the puzzled citizen who wrote:

"Dear Uncle Sam:

"Will you have one of your experts tell me whether vitamins are real

has been dulled by the fading out of crispness, the wilting down of hours of travel from ground, to market, to kitchen. Appetite is disappointed by dilution of luscious taste and fainting of texture. Fresh leafy vegetables must be fairly crackling with flavorful juices to give us all the health they can. Shakespeare, possessed of inspired common sense instead of scientific theory, told us, all we know now, that we might expect health to wait on the combination, good digestion and appetite.

In place of anxious thought on hearsay theory, let us experiment with a prescription of our own. Let us take about equal parts of work, play, and rest for a basis. Then we will add happy, sensible eating of three meals a day of about the amount and kind we like.

For flavor and texture of fresh green things we can depend on the newest principle in refrigeration.

With joy-in-life as a sauce we shall find health not to hang on weights, charts, nor on calories as much as on shrewd sense and a happy heart.

### HOME SERVICE

HELPFUL suggestions for organizing and operating home service departments are included in a report of the Home Service Subcommittee of the National Electric Light Association. The purposes of this department, creating and maintaining satisfactory customer relations and increasing the sale of appliances and kilowatt-hours, are outlined in detail.

The set-up of a home service department is thoroughly discussed and a number of photographs depict well-arranged quarters. Attractive arrangements of the bungalow type home service department are also shown and described. All details necessary for the proper conduct of home service work are covered, such as lectures and demonstrations, women's clubs, rural groups, courses in food preparation, radio talks, publicity material and advertising.

Refrigeration plays an important part in the home service worker's daily routine, and it is interesting to note that in nearly every photograph of model set-ups in the report, the refrigerator stands out importantly in all the kitchen settings.

### YOUNG AND OLD

Enjoy Healthy Frozen Desserts

By Mrs. P. K. Dunning

Home Service Department, The Society for Electrical Development, Inc.

THESE recipes are used frequently in our house, not only on behalf of the four-year-old member of the family, but because everyone enjoys them. They were developed for the four-year-old who is the most rigorously brought-up-under-a-specialist's care child you will find in a long journey, and are mainly variations on the junket, custard and stewed fruit themes.

#### Orange Cream Custard

2 tablespoons cornstarch  
¼ cup cold milk  
2 cups milk, scalded  
1 teaspoon orange or vanilla extract  
2 eggs  
2 tablespoons sugar  
¼ teaspoon salt

Mix cornstarch with cold milk, add to scalded milk and cook in double boiler fifteen minutes, stirring constantly until mixture thickens and afterwards occasionally. Beat egg yolks and add sugar and salt to them. Add to first mixture and cook three minutes, stirring constantly. Remove from fire and cool. Cut several oranges into sections and put in bottom of pudding dish. When custard mixture is cool add the flavoring and pour over the orange sections. Beat the egg whites stiff, add gradually ¼ teaspoon salt, ¼ teaspoon baking powder and four tablespoons powdered sugar. Pile on top of custard mixture and bake in electric range oven at 325 F. about 10 minutes, or until light brown. Chill thoroughly.

#### Caramel Custard

2 cups scalded milk  
2 eggs  
¼ teaspoon salt  
1 teaspoon vanilla  
¼ cup sugar

Melt sugar in frying pan, stirring constantly until syrup turns a light brown in color. Add gradually to the hot milk, being careful that the milk does not bubble up and run over the pan. As soon as the sugar is melted in the milk, add the mixture gradually to the slightly beaten eggs. Add the salt and vanilla and pour into a buttered baking dish. Place in pan of hot water and bake in electric range oven at low heat until a silver knife, run into the custard, comes out clean. Cool and place in electric refrigerator to chill thoroughly. Serve with a sauce made by boiling together for six minutes 3 tablespoons of sugar melted and browned as above, and ¼ cup boiling water.

#### Fruit Whips

Apple sauce, stewed dried apricots or stewed prunes may be used in this recipe, and it is impossible to give any definite quantities. We use about one

egg white to one cup of fruit pulp. We beat the egg white very stiff and fold in the sieved fruit pulp. We then sweeten the mixture to taste and put it into a pan of the electric refrigerator, returning it to the refrigerator's freezing compartment. There is so much sugar in these whips that they do not freeze hard in the refrigerator, and may be kept over to the following day. We serve these whips with a custard sauce made of the egg yolk, a pinch of salt and a quarter of a cup of sugar. We mix these three ingredients together and add about one-half cupful of scalded milk. We cook this mixture in a double boiler until it will coat the spoon with which it is constantly stirred. Then we remove it from the range, add one-quarter of a teaspoonful of vanilla and pour it into a covered jar and store it in the electric refrigerator.

#### Spanish Cream

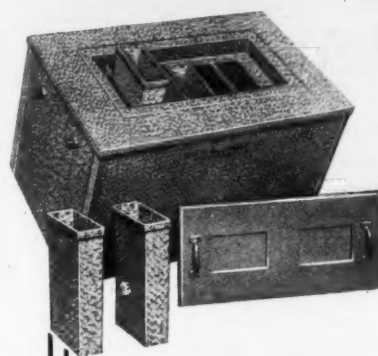
2 teaspoons granulated gelatine  
2 cups milk  
2 eggs  
½ cup sugar  
¼ teaspoon salt  
1 teaspoon vanilla

Scald milk with gelatine in double boiler. Add the sugar and pour slowly onto the yolks of eggs, which have been slightly beaten. Return to the double boiler and cook until thickened, stirring constantly. Remove from range and cool thoroughly. Add salt, flavoring, and fold in the egg whites which have been beaten stiff. Put in electric refrigerator to chill thoroughly. We like to have our cream the same consistency throughout, so we beat the mixture up once just as it is beginning to get firm. Otherwise there will be a layer of clear jelly on the bottom. This cream is delicious served with a little chocolate syrup, a dash of caramel sauce or a little maple syrup. It is also good with a fruit sauce. Crushed strawberries folded into the custard just before the egg whites are added are delicious.

### DOWNES-SMITH COMPANY PLACE TWO JOBS

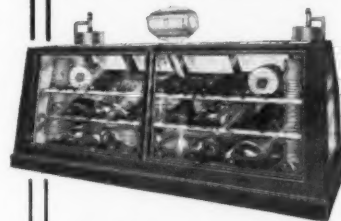
Bridgeport, Conn.—A. F. Becker, manager of the Downes-Smith Company, 540 Fairfield Avenue, Frigidaire distributors for Bridgeport and Stamford, reports an important recent installation. Seven Bridgeport meat markets operated by Coyne Bros. were equipped with standard walk-in coolers, operated by C 1 hp. compressors. Fourteen 96F coils and seven 20X coils were also installed.

An A. P. 60 and a D. 71 box were installed in the gallery of the Black Rock Yacht Club. A ½ hp. O compressor operates both boxes on a duplex hook-up.



### New Low Prices

The Thesco 4000 Ice Can Unit shown above, adaptable to all forms of mechanical refrigeration, is now offered at new low prices. Write for information.



The Thesco No. 900 Refrigerator Display Counter, shown above, provides an over-all, full-length display, and enables a much quicker service with much less stooping and bending. Write for descriptive literature which explains in detail the abundant time, labor, and money-saving features of these two prominent Thesco Units.

### A FEW TERRITORIES STILL OPEN—

Distributors: Write for complete proposition, discounts, and profusely illustrated catalogs. Catalog 94 describes 70 styles of Refrigerator Display Counters, and other refrigeration and store equipment. Catalog 85 shows 106 items of interest to Hotels, Hospitals, and Institutions.



The C. Schmidt Co.

John and Livingston Ave.  
CINCINNATI, OHIO



Mrs. Elizabeth Stone Macdonald

no meals without a bitter sauce of arithmetic.

This form of calculus may be as essential for sickness as a clinical thermometer, but it is not often a desirable cocktail for healthy men and women. Moreover, weight tables themselves, as well as calory allotments, are for averages, and no one human individual is an average. Each one of us is a separate, a unique, living laboratory. In each of our chemical processes go on peculiar to ourselves. Our precise requirements are unlike those of any other person alive, just

things or hypothetical, like the trinity?"

Succeeding our bother with vitamins comes a new anxiety. This time it is over what happens after the food is eaten. Does acid or alkali balance, result after we have sent our meal on its way through the digestive tract. What worry is due next to appear after this one has its turn is not yet clear.

It takes only a little reflection to remind us that fear and worry are not aids to health. Further, we also know that ignorance is the most prolific source of fear. The moment we become competent to prescribe a diet the more certain we are that food "isms" are a fairly accurate indication of too partial a knowledge. Diets, mathematically calculated, are for the sick; square meals, happily eaten, are for the well.

The truest test of health lies in the eagerness for a new day's adventures with which we average to rise in the mornings, and in the number of hours and days we have had to lose out of our last few months of working time. Resistance to colds, for instance, is a good rough index of health.

Most of us have unconsciously worked out a pretty good diet schedule that squares astonishingly well with laboratory findings. If only we will stop worrying so much about our meals, maybe, in nine cases out of ten, what we eat will do us more good. There is enough nervous strain in our days without mixing it in our menus.

It might be well to cease our solemn kow-tows to semi-scientific popularizations of research and substitute a generous measure of what the French—those wisest of eaters—call joy-in-life, the joie de vivre.

The pioneer and the peasant know this joy. It arises from wholesome accomplishment—by body and mind harmoniously exercised—by quiet, refreshing sleep, and by play which is truly recreative.

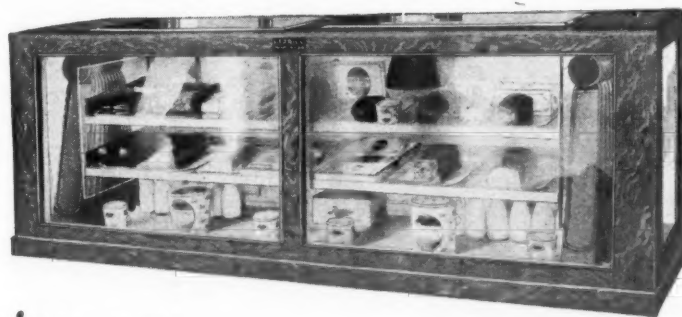
Three times a day it is expressed in the satisfaction of eating with zest foods so fresh that the dew and the sunlight still are on them.

When most of us lived on farms, this first, fine garden-flavor was the rule. With the development of city life we have gained more variety on our tables than ever our ancestors enjoyed. The edge of enjoyment of flavor, however,

**Gibson**  
Custom  
Built  
DISPLAY CASES  
and  
REFRIGERATORS  
for  
Quick  
Frozen  
Foods  
MAXIMUM DISPLAY  
POSITIVE  
PRESERVATION

Gibson Refrigerator Co.  
Commercial Dept., Greenville, Michigan

## HERRICK FULL VISION CASE



It gives you  
the Inside Track  
in a Competitive Field

The average grocer or butcher recognizes almost instantly that the HERRICK Full Vision Case was designed for his needs. It is built from the display and sales point of view; at the same time it makes the best possible use of the advantages of mechanical refrigeration, at the lowest operating cost.

The construction is distinctly HERRICK. Highly efficient HERRICK insulation is generously used—three full inches thick in the bottom, two inches in back and doors. Three thicknesses of glass are used throughout. Each glass is set separately in airtite plastic which makes the glass absolutely tight.

Airtight doors close with a slight push of the hand or knee. Heavy automatic latches close them tightly, against gaskets which seal them against intrusion of warm air or escape of cold air. These are some of the construction features which enable operation at a cost which one user reports as only \$4.00 a month for electricity during the hottest months.

Write for complete catalog of HERRICK commercial models.

**HERRICK REFRIGERATOR CO.**

1006 Water Street, Waterloo, Iowa